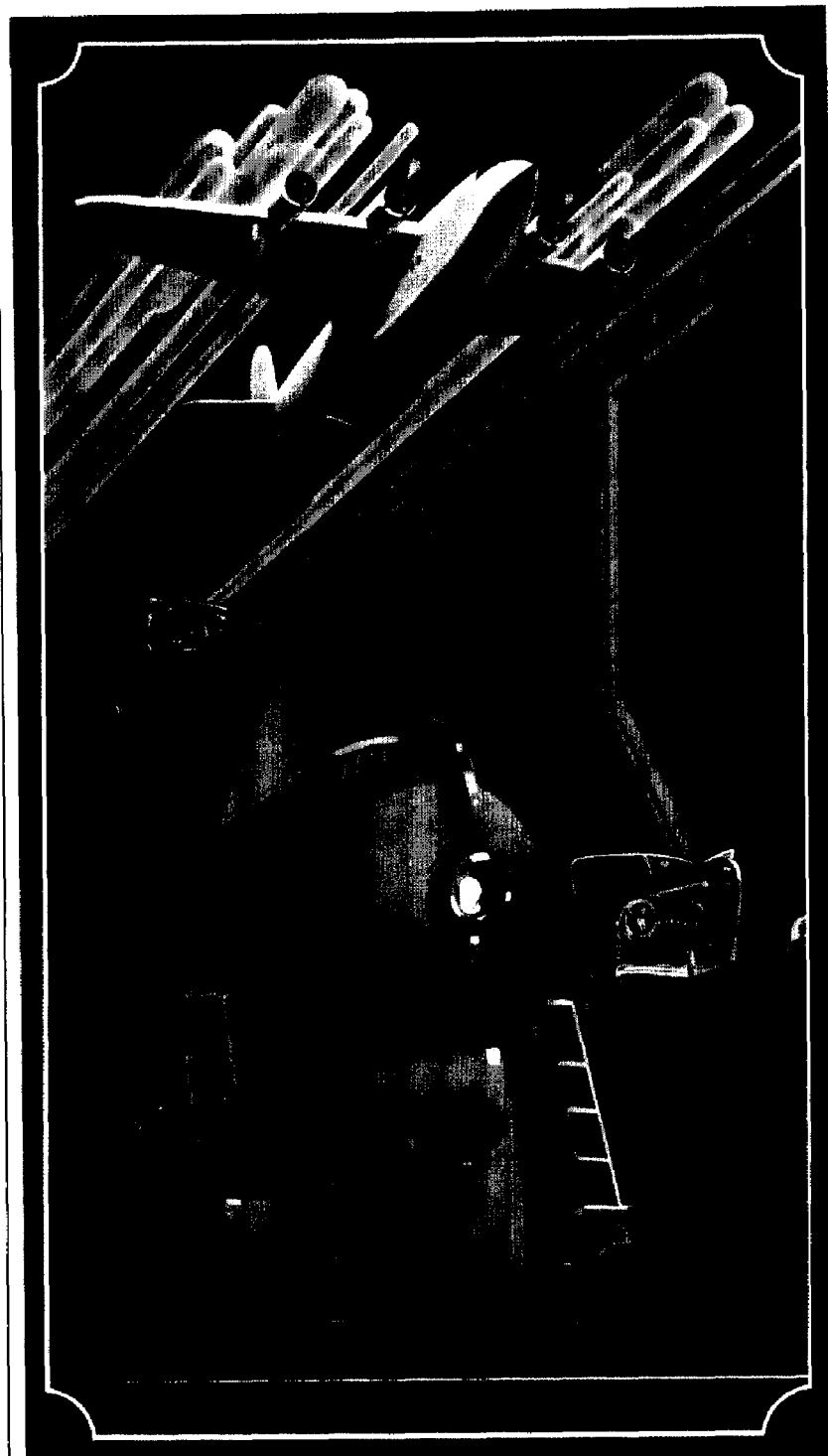


# THE G·A·O

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# JOURNAL

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GETTING FROM  
HERE TO  
THERE

*Investing in  
infrastructure*

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THE TOUGH  
PROBLEMS  
REMAIN

*Issues for the  
102nd Congress*

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GOVERNMENT-  
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ENTERPRISES

*Is current regulation  
enough?*



NUMBER 12  
SPRING 1991

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## FROM THE COMPTROLLER GENERAL

**W**E HAD THE PRIVILEGE, this January 23, of appearing before the Senate Governmental Affairs Committee to testify on "Major Issues Facing the 102nd Congress." Senator John Glenn, who chairs the committee, asked us to survey the problems we had highlighted in our November 1988 *Transition Reports* and to comment on whatever progress may or may not have been made since then.

Our general view was not a cheery one. As we spoke, war had erupted abroad and recession continued at home. Looking over the range of national concerns we had pointed out two years before, we could discern some improvements in the attitudes being brought to bear but relatively little measurable progress. We pointed out that the budget deficit problem is far from solved, and that numerous uncertainties—from the cost of the war to the depth of the recession—put in question the likelihood of bringing it under control any time soon.

We also mentioned some of the biggest challenges, such as restructuring our defense establishment, overhauling our health care system, and devising—and paying for—a national transportation policy.

What struck us, however, having been afforded so worthwhile an opportunity to step back and look at the nation's problems as a whole, is that these problems are surmountable. Most, of course, are enormous in their complexity and potential cost. But what they require most is a commitment on our part to finding solutions and not turning away until the job is done. With the Persian Gulf war successfully concluded and the nation's optimism and sense of accomplishment running high, we can all hope that this spirit will carry over into other, no less vital national pursuits.

Our testimony, updated slightly since we delivered it two months ago, has been adapted for the *GAO Journal* and appears in this issue.

Three other articles concern the nation's infrastructure, focusing on the investment required in a competitive economy to keep people, goods, and information moving. David Alan Aschauer, professor of economics at Bates College and formerly a senior economist at the Federal Reserve Bank of

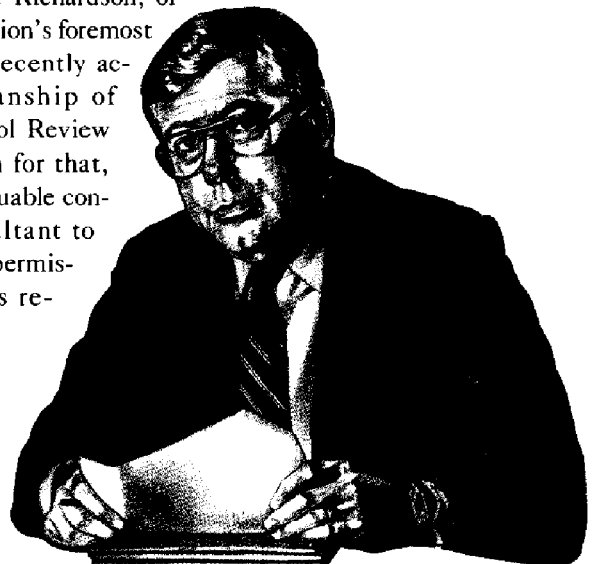
Chicago, offers his view of the importance of that investment and how he would recommend it be supplied. GAO's Kenneth M. Mead and Jacquelyn L. Williams-Bridgers discuss the intermodal approach to transportation planning—a way of making the investment in infrastructure more productive. Gail Garfield Schwartz, Deputy Chairman of the New York State Public Service Commission, discusses what we might need to study before making further investments in high-tech telecommunications.

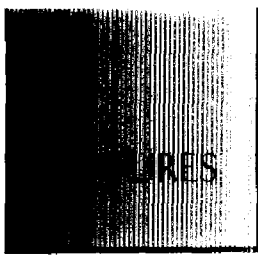
The three articles cover plenty of ground, and remind us that maintaining the nation's infrastructure is essential to maintaining the nation's economic health as well.

**O**ur last feature this issue is on government-sponsored enterprises, a group of institutions that deserve a more widespread public understanding than they currently enjoy. The reason is that these institutions—which carry such familiar nicknames as Fannie Mae, Freddie Mac, and Sallie Mae—have come to play huge and vital roles in the economy. Their connections to the federal government and, by extension, to the taxpayers, make it important that people understand what government-sponsored enterprises do, what risks they may entail, and what aspects of their regulation may need closer attention. The article by GAO's Suzanne McCrory should help expand that understanding.

Those of us who attended GAO's 8th Annual Management Conference last November were fortunate to hear Elliot L. Richardson speak on "The Value of Evaluation"—something that has been very much at the heart of GAO's activities for almost two decades. Mr. Richardson, of course, is one of the nation's foremost public servants. He recently accepted the chairmanship of GAO's Quality Control Review Board. We thank him for that, and for his long and valuable contributions as a consultant to GAO, and also for his permission to reproduce his remarks on these pages.

*Charles A. Bowsher*





David Alan Aschauer

# THE THIRD DEFICIT

*The long-term decline in infrastructure spending may be as damaging to our future as the budget and trade deficits.*

**A**MERICA'S ABILITY TO meet a number of its pressing problems—such as environmental deterioration, declining competitiveness in the international economic arena, a persistent drug problem, and the burden of an aging work force approaching its retirement years—will depend on a strong and steady performance by the national economy. Yet, over the past 20 years, the U.S. economy



Because the infrastructure is a foundation of the economy, the decrease in infrastructure investment has detracted from the country's economic strength and, by extension, from its ability to address many of its problems.

has not been performing as well as it did in the "golden age" of the 1950s and 1960s. For instance, we have seen a continuing slump in the growth rate of economic productivity—that is, in the annual gains in the amount of output produced by an hour of work effort. This slower growth in productivity translates into slower growth in per capita output and in tax revenues, which makes dealing with critical national problems increasingly difficult.

So strong productivity growth is a necessary precondition for innovative public policies. And the key to productivity growth is investment—both in physical capital such as machines and factories and in the knowledge achieved by spending on research and development, education, and training.

Unfortunately, investment has not been particularly robust over the past few decades.<sup>1</sup> In particular, public investment in the nation's core infrastructure of highways, bridges, mass transit, water and sewer systems, and other public facilities has dropped—from about 4 percent of gross national output in the late 1960s to a little more than 2 percent in the late 1980s. Because the infrastructure forms a crucial foundation for the national economy, this falloff in infrastructure spending has detracted from this country's economic strength and, by extension, from its ability to address many of its current problems. Therefore, even though it might seem that because of the current budget deficit we can't afford to make substantial investments in infrastructure, the fact is that we can't afford *not* to invest in our public capital stock.

## The traditional view

According to conventional wisdom, spending on public facilities affects the economy by creating jobs and stimulating the production of goods and services. An increase in spending on highways not only boosts employment in the construction industry but also, as construction workers spend their wages on goods and services, in other industries as well. For

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example, in a study of New Jersey by The Road Information Project (TRIP), it was estimated that each \$100 million of additional highway spending would generate a total of 2,500 extra jobs and \$136 million worth of added goods and services.<sup>2</sup>

While the precision of these types of figures might be open to argument, the logic of this approach is correct—as far as it goes. But there is a fundamental limitation in this way of looking at things. By focusing on the way public expenditures on highways and other public facilities affect the total *demand* for output, the conventional approach turns a blind eye to the important ways in which infrastructure investment affects the total *supply* of private-sector output.

## Infrastructure and supply

In my opinion, the stock of public infrastructure capital is a critical, though often overlooked, determinant of the economy's ability to supply goods and services to the market. Public capital accumulation is at least as important to the course of material prosperity as is private capital accumulation. As stated by Richard Bartel, editor of *Challenge* magazine,

*Investment is the key, as economists know very well, to economic growth and material progress. History records how the creation of physical and human capital drives the wealth of nations. Yet even some economists tend to think of investment in narrow terms—private spending on business plant and equipment. We often forget about additions to the stock of public infrastructure—spending on roads, bridges, mass transportation, airports, waterways, water supply, waste disposal facilities, and other public utilities.*<sup>3</sup>

Specifically, one may argue that public capital is an intermediate input to the production process. By interacting in a complementary fashion with private labor and capital, it renders private-sector production more profitable and efficient.

There is a multitude of ways that infrastructure might influence productivity in this manner. First, an improved infrastructure will help to reduce or eliminate production bottlenecks. One clear case would be the efficiency gains arising from the provision of a

According to current estimates, some 15 to 60 percent of the total falloff in productivity growth in recent decades is to be attributed to the neglect of the U.S. infrastructure.

better transportation infrastructure, which can enable a firm to reap the advantages inherent in "just-in-time" inventory management. For instance, over the past half-decade, the Campbell Soup Company has embarked on a just-in-time delivery program for its food production operations. Because rail transportation was regarded to be unreliable, the company has switched from rail-based to truck-based transportation of its product. At Campbell's Sumpter, North Carolina plant, this switch to trucking and to just-in-time inventory control has succeeded in reducing inventory holdings by 67 percent. The resulting cost savings have been considerable.

Just-in-time inventory control seems to be a growing practice in this country. According to one survey, while about 19 percent of nationwide shipments were accomplished in accordance with just-in-time principles in 1987, the survey respondents expected that this would rise to over 32 percent by 1995. So there is significant potential for further cost reductions and profit enhancement through just-in-time inventory control. But the potential will remain just that—potential—unless adequate transportation investments are made in the years ahead.

Second, a better transportation infrastructure can allow firms to diversify their product lines and reduce fluctuations in overall sales and profitability. Firms with the capability of switching from one product line to another will mitigate losses arising from shifts in product demand. Success in this attempt to minimize risk, however, depends on good access to a broader variety of material inputs—from a greater number of suppliers—as well as good access to different groups of consumers.

Third, an upgraded transportation infrastructure allows improved access to labor. For instance, a good surface transportation network—roads, light rail, and the like—effectively lets a firm reach farther out into the labor pool and results in better matches between jobs and workers' skills.

Finally, a better infrastructure may allow firms to capture various economies of scale—that is, efficiency gains arising from larger-scale production facilities. For example, because of the existing road

network, Coca-Cola Midwest has been able to consolidate all its bottling activity at a larger, more efficient plant in Eagan, Minnesota. The elimination of a number of remote warehouses and the move to "rolling warehouses"—that is, storage trucks—have allowed Coca-Cola to reap substantial efficiency gains.

For all these reasons and more, an improved infrastructure can boost productivity in the private sector. Indeed, there appears to exist a dynamic interaction between the infrastructure and productivity. In this "virtuous cycle," a better stock of infrastructure capital lifts productivity and, by lowering costs and raising profits, also promotes private investment. This, in the space of a few years, raises productivity still more. As this higher level of productivity then expands the resource base available for private investment in factories and machines, the cycle begins anew.

Recent empirical research to be found in the economics literature<sup>3</sup> suggests that this "virtuous cycle" was broken during the latter half of the 1960s. Indeed, public expenditure on infrastructure facilities has fallen rather dramatically over the past two decades or so. After rising as a percentage of gross national output during the 1950s and early 1960s, public infrastructure spending peaked at nearly 4 percent of gross output in the late 1960s, then slid to a low of about 2 percent of output in the early 1980s. As of 1987, infrastructure investment had rebounded somewhat—to 2.2 percent of output—but was still well below the levels attained during the 1960s.

During this same period, the labor force continued to grow, placing additional pressure on the available public facilities. Indeed, the falloff in public investment, as a share of output, is reflected in a similar drop in the amount of public infrastructure capital available to each worker in the private economy. At the same time, however, the amount of private business capital per worker—that is, trucks, machinery, and factories—has continued to climb. So while in recent years the private sector has been adding to the capital stock at a faster pace than the labor force has been expanding, the same cannot be



said of the public sector. It is in this sense that we may claim that there is a "third deficit" in the national accounts—a deficit *at least* as important to our economic future as the budget and trade deficits. This third deficit, resulting from a shift in government spending priorities away from infrastructure investment, has broken the virtuous cycle of investment and productivity growth and is therefore a critical factor behind some of our long-term economic ills—our depressed profit rate on private capital, our overall failure to invest adequately in our future, and our sluggish productivity growth.

The literature allows three broad conclusions about the importance of infrastructure investment to the supply side of the economy.<sup>5</sup>

First, a one-percent increase in the stock of infrastructure capital raises the rate of return to private capital by one-tenth of a percentage point. Loosely speaking, if the federal, state, and local governments in the United States had continued to invest in infrastructure during the 1970s and 1980s at the average pace maintained during the 1950s and 1960s, there would have been much less of a "falling rate of profit" to worry economists—let alone stockholders.

Second, such an increase in public investment over the past two decades would have had the net effect of raising the national investment rate (private plus public investment) back to levels comparable to those of the 1950s and 1960s. At first, the additional government expenditures on infrastructure would probably have caused real interest rates to be slightly higher and may also have increased the prices of capital goods; this may well have depressed private investment in plant and machinery for a period. But, over time, the positive effect of an upgraded public capital stock on corporate profits would have taken hold, private investment would have rebounded, and national investment would have been stimulated.

Third, because the national investment rate would have been higher, productivity growth—that is, annual gains in productive efficiency—would have benefited substantially. Indeed, according to

current estimates,<sup>6</sup> some 15 to 60 percent of the total falloff in productivity growth in recent decades is to be attributed to the continued neglect of the U.S. infrastructure.

## Financing infrastructure

Clearly, this analysis suggests that this country should significantly increase its infrastructure expenditures, focusing particularly on transportation facilities, both surface and air. Yet in this day of fiscal distress, it is necessary to couple advocacy for increased spending with some plan for generating the required funds.

One source of money could be the Highway and Airport Trust Funds, which have accumulated a surplus of more than \$30 billion. Spending down the Trust Fund surplus over a 10-year period—or, alternatively, using the annual interest income on the Funds—would provide some \$3 billion annually for infrastructure investment. Still, this sum seems paltry when compared with the estimated annual need of an additional \$50 billion to \$100 billion.<sup>7</sup> The Trust Funds offer no more than a start on financing national infrastructure requirements.

One could also look to the large—and growing—surpluses in the Social Security Trust Funds. According to Social Security Administration projections, by 1995 Social Security income will exceed outgo by more than \$100 billion annually. This income will peak at nearly \$500 billion around the year 2015, and the Social Security Trust Fund will maintain a surplus until the year 2030. These surpluses, of course, are intended to fund benefit payments to future retirees. And, in a strict *accounting* sense, the surpluses will accomplish this end. But in an *economic* sense, the Social Security surpluses will be capable of funding future benefits and allowing the current work force to maintain consumption only if, in some way, the surpluses add to national investment over the coming decades. Higher

If government had continued to invest in infrastructure during the 1970s and 1980s at the average pace maintained during the 1950s and 1960s, there would have been much less of a "falling rate of profit" to worry economists—let alone stockholders.

national investment will raise the national capital stock; the higher national capital stock will raise productivity; and the stronger economy will generate more consumption goods for both workers and retirees.

The current administration has advanced its own proposal to channel the Social Security surpluses into private investment. Under this scheme, the surpluses would be paid into a separate "Social Security Integrity and Debt Retirement Fund" for the purpose of reducing the amount of federal debt held by individuals in the form of U.S. bonds and notes. The idea is that this will reduce pressure on interest rates, lower the cost of capital, and stimulate private investment in plant and equipment.

No doubt, this mechanism would indeed help to raise national investment and boost productivity growth. To a certain degree, the Social Security system would be funded in an economic as well as in an accounting sense. But using the Social Security surpluses to fund public infrastructure projects would be a more direct route to raising national investment. The exact funding mechanism could take one of two forms: The federal government could use funds from the Social Security accounts to increase grants to states and municipalities; or the federal government could invest the surpluses in a special category of "infrastructure bonds" issued by state and local governments. Either mechanism would have the desirable effect of increasing public capital formation and, thereby, of economically funding the Social Security system in an efficient manner.

## Spending to meet our needs

In my opinion, we must take less time worrying about how the government finances its expenditures—whether by taxes or by debt—and more time

thinking about how the government chooses to allocate its spending to meet the current and future needs of the economy. Last summer, President Bush referred to the budget deficit as a cancer sapping the economy of its strength. The deficit is certainly an important concern, but from a long-term perspective it may in fact be more a symptom than a cause of our economy's lethargy. If we are to think of the deficit as a cancer, we must surely think of inadequate spending on our nation's infrastructure as another. •

From a long-term perspective, the budget deficit may be more a symptom than a cause of our economy's lethargy. If we are to think of the budget deficit as a cancer, we must surely think of inadequate spending on our nation's infrastructure as another.

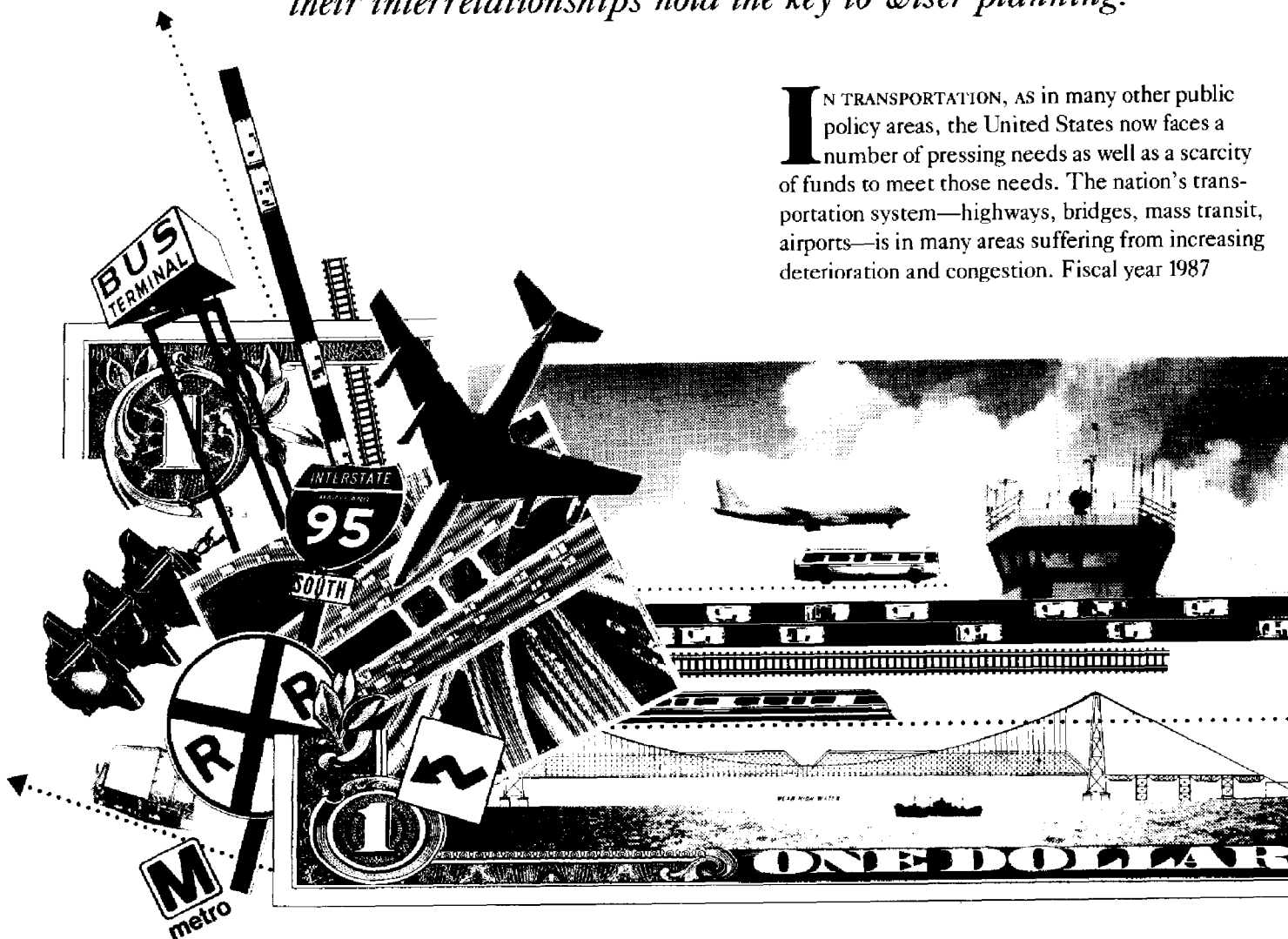
1. For example, the annual growth rate of the net private capital stock has been about 3.1 percent in recent years, down from around 3.8 percent during the 1950s and 1960s.
2. The Road Information Project, "An Analysis of the Economic Impact of Increased Highway Funding in New Jersey," prepared for the New Jersey Alliance for Action, December 1987.
3. Richard J. Bartel, "Editor's Note," *Challenge*, November 1989.
4. For example, see the following papers: David A. Aschauer, "Government Spending and the 'Falling Rate of Profit,'" *Economic Perspectives*, July 1988; David A. Aschauer, "Is Public Expenditure Productive?" *Journal of Monetary Economics*, March 1989; David A. Aschauer, "Does Public Capital Crowd Out Private Capital," *Journal of Monetary Economics*, October 1989; David A. Aschauer, "Public Investment and Productivity Growth in the 'Group of Seven,'" *Economic Perspectives*, October 1989; Alicia H. Munnell, "Why Has Productivity Growth Declined?" *New England Economic Review*, January 1990; Alicia H. Munnell, "How Does Public Infrastructure Investment Affect Regional Economic Performance?" *New England Economic Review*, November 1990.
5. See David A. Aschauer, "Government Spending and the 'Falling Rate of Profit,'" "Is Public Expenditure Productive?," "Does Public Capital Crowd Out Private Capital," and "Public Investment and Productivity Growth in the 'Group of Seven.'"
6. David A. Aschauer, "Is Public Expenditure Productive?"; Alicia H. Munnell, "Why Has Productivity Growth Declined?"; and Alicia H. Munnell, "How Does Public Infrastructure Investment Affect Regional Economic Performance?";
7. National Council on Public Works Improvement, *Fragile Foundations* (Washington, D.C.: U.S. Government Printing Office, 1988).

*Kenneth M. Mead & Jacquelyn L. Williams-Bridgers*

# THE INTERMODAL APPROACH TO TRANSPORTATION

*Rail, water, air, mass transit, highways—  
their interrelationships hold the key to wiser planning.*

**I**N TRANSPORTATION, AS in many other public policy areas, the United States now faces a number of pressing needs as well as a scarcity of funds to meet those needs. The nation's transportation system—highways, bridges, mass transit, airports—is in many areas suffering from increasing deterioration and congestion. Fiscal year 1987



spending by all levels of government on highways and mass transit systems was roughly \$80 billion; according to some estimates, the process of bringing the current surface transportation system up to a tolerable level of service, maintaining it there, and expanding transportation capacity to accommodate future growth would require that this annual expenditure be increased by 43 percent.<sup>1</sup> In today's budget environment, the prospects for that type of spending increase are dim.

This is unfortunate, not simply because good transportation makes Americans' lives more convenient, but more importantly because a sound transportation infrastructure is critical to the nation's economic strength. For example, one out of every 12 U.S. civilian jobs is related to highway transportation, whether in highway construction and maintenance or in industries that produce and maintain trucks, buses, and automobiles.<sup>2</sup> Overall, transportation is the parent of nearly one in every five dollars of U.S. gross national product.<sup>3</sup> Therefore, increases in the efficiencies of this country's transportation networks can make important contributions toward economic productivity. (For a fuller development of this point, see the preceding article, "The Third Deficit," by David Alan Aschauer.)

The United States seems to be in a bind: It needs to invest in its transportation infrastructure for the sake of its economic health, but it lacks the resources to make all the necessary investments. How might policymakers get around this apparent impasse?

One approach involves changing some of the fundamental ways in which transportation policy is now conceived and executed. Currently, the nation's transportation system tends to be treated as a loose collection of different transportation modes, such as interstate highways, air travel, mass transit, and passenger and freight rail. The challenge facing policymakers is, instead, to regard transportation as a system for moving goods and people by whatever mode or combination of modes can perform the task most efficiently. In other words, rail, water, air, mass

transit, and automobile transportation should all be regarded as linked to each other in one network; each mode should be called upon to do what it does best in order to reduce transportation costs, stimulate economic growth, and provide the most efficient and effective means of travel. Let's call this approach *intermodalism*. Without this relatively new way of looking at transportation needs, it will be impossible to cope with the growing congestion and deterioration that characterize much of the nation's transportation infrastructure.

## Assessing needs

At present, intermodalism is not a guiding idea at the U.S. Department of Transportation (DOT). Numerous factors prevent an intermodal approach from being adopted. For one thing, when DOT prepares needs studies for highways, bridges, mass transit, and airways, it prepares them all separately. This precludes consideration of strategies to meet transportation needs by the most cost-effective mode available.

## Highways and mass transit

For example, in its biennial highway needs report to Congress, DOT estimated that approximately \$476 billion would need to be spent, at all levels of government, through the year 2005 to maintain the nation's highway system at its 1985 condition.<sup>4</sup> Furthermore, the report noted, on some highways it appears impossible to construct the additional lanes needed to reduce congestion because the required rights-of-way cannot be obtained. In all its 190 pages, the report dedicates only two paragraphs to the issue of finding alternatives to new highway construction and highway improvements. No attempt is made to assess the costs of these alternatives; instead, the report simply mentions mass transit and traffic systems operation improvements as possible ways to make up the gap between what's needed and what can be built.

The report's relative inattention to these alternatives reflects a corresponding inattention at the institutional level. Within DOT, there has been no requirement that the Federal Highway Administration

The various modes of transportation should be regarded as linked to each other in one network; each mode should be called upon to do what it does best.

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(FHWA) and the Urban Mass Transit Administration (UMTA) jointly identify needs and related costs. Such a requirement, however, seems to be absolutely essential in order to encourage recognition of mass transit both as an alternative to construction of new highways and as a partial solution to existing highways' capacity problems.

### Highways and rail

Another example of the general narrowness of viewpoint that seems to prevail at the federal level is the underutilization of rail transport as an alternative to highways and bridges. According to DOT's most recent highway and bridge needs assessment, nearly half of the nation's bridges and half of the interstate highway system are in substandard condition. Furthermore, over the next three decades the demand for surface travel is expected to double. One estimate places the cost of making all needed capital improvements at more than \$100 billion annually through the year 2020.<sup>5</sup>

One of the causes of the highway system's deterioration is the increasing heaviness of the loads carried by the trucking industry. When construction of the interstate system began in the 1950s, the trucking industry took advantage of it and became the primary provider of light-density, short- and medium-haul transportation services. The railroads, unable to compete for these services, became increasingly dependent on the markets for long-distance and heavy-haul loads, such as timber and agricultural products. But because railroads have proved unprofitable and have been abandoned in substantial portions of the country, these heavy, long-distance shipments have in many cases been shifted to trucks—even though the nation's highways were not designed to carry these heavy loads. As a result, highways have suffered damage and deterioration.

The trucking and rail industries are fiercely competitive; the trucking industry, for example, has given early signs that it will seek congressional approval of increased size and weight limitations for trucks traveling the interstates. Therefore, it seems unlikely that these two industries will initiate discussions of such cooperative measures as rail-highway transfer facilities—stations where cargo could conveniently be transferred from trucks to rail and vice versa. To make matters worse, no national

strategy now exists to reduce the impact of heavy cargoes on highways, and there has been no federal attention to such modal interlinks as rail-highway transfer stations.

### Ground access to airports

Of 41 major airports in the United States, about 23 are experiencing congestion on the ground and 16 are operating at or near airspace capacity. Clearly, congestion both on the ground and in the air is a problem. The Federal Aviation Administration (FAA), however, has concentrated on airspace congestion as the primary capacity problem. It has been slow to fund improvements in airport ground capacity because it considers such investments to be a local responsibility.

Unfortunately, state and local governments have also tended to ignore congestion on the ground at their airports, since aviation planning is generally done independent of planning for other transportation modes. Furthermore, future needs estimates indicate that only about 25 percent of investment in airport access would be applied to public transit, even though public transit offers great promise for reducing ground congestion. Here again, the lack of federal leadership is disconcerting, especially because the efficiency of airports has regional and national significance. If state and local agencies are not inclined to deal with ground traffic congestion, and the federal government ignores it as well, it is difficult to see how the problem can be resolved.

### Organizational obstacles

In addition to the problem of how the federal government assesses transportation needs, obstacles to a more intermodal approach also exist in the organizational structures of federal agencies. To create an efficient and effective transportation system requires interagency and (in the case of DOT) *intra*-agency cooperation in planning, funding, and policy-making. Unfortunately, transportation policy-making is now fragmented at both the administrative and legislative levels of the federal government.

DOT, after more than two decades of existence, is still struggling to coordinate the policies and practices

The Department of Transportation prepares separate needs studies for the different modes. This precludes consideration of strategies to meet transportation needs by the most cost-effective mode available.

of its different mode-specific administrations, including the Federal Aviation Administration (FAA), the Federal Highway Administration (FHWA), and the Urban Mass Transit Administration (UMTA). Highway transportation and mass transit function most effectively when each connects efficiently with the other—for instance, when the necessary parking lots exist. And these two modes should also connect passengers with other modes such as air and rail travel. But DOT has no formal mechanism for ensuring that those who do the planning and funding for one of these modes will communicate with those doing the planning and funding for the others. As a result, at the federal level the issue of the accessibility of one transportation mode to other modes has been almost entirely overlooked—as we have already seen in the case of surface access to airports.

Not only does this organizational setup prevent the federal government from leading the way toward an intermodal approach, it can also present obstacles to states attempting to plan and fund intermodal projects. For instance, the state of Arizona recently applied to the FAA for a \$1 million grant to investigate the need for a new regional airport in Phoenix. The grant application included a study of highway and mass transit access to the proposed airport. The FAA approved only half the grant request, denying the remainder partly on the ground that the FAA does not fund highways or mass transit projects.

Another complicating factor is the distribution of transportation modes among different congressional committees. Most committees have jurisdiction over only one or two modes. In the House, the Public Works and Transportation Committee has jurisdiction over both mass transit and highways, whereas in the Senate, mass transit is under the Banking, Housing, and Urban Affairs Committee and highways are under the Environment and Public Works Committee. Similarly, jurisdiction over passenger rail in the House is split between the Public Works and Transportation Committee and the Committee on Energy and Commerce. This scattering of modes among different committees makes intermodal planning all the more difficult.

The same is true of the financing mechanisms currently used for transportation. For a variety of historical reasons, Congress funds each transporta-

tion mode in a different way—through trust funds, contract authority, borrowing authority, loan guarantees, or regular authorizations and appropriations from general revenues. In addition, reauthorizations for highways and for air travel are made in alternate years. Such practices discourage intermodal approaches to transportation problems.

This type of inflexibility exists even *within* funding mechanisms. Consider, for example, the Highway Trust Fund. Under the umbrella of the Highway Trust Fund are mechanisms for financing both highways and mass transit programs. For every 10 cents collected in highway user taxes for the highway account, another 1.5 cents is collected for the mass transit account. Revenues collected and credited to one account are generally not allowed to be applied to the other; for instance, money in the highway account cannot be used for mass transit, even when mass transit would be a more economical and efficient means of providing the needed transportation. This rigidity can stymie attempts to take an intermodal approach to solving transportation problems. Luckily, there are moves afoot to make this funding more flexible: This year, DOT has proposed to Congress that funding rules should be relaxed so that, at the discretion of individual states, some highway dollars could be channeled into mass transit projects and vice versa.

## State projects

Some states have already demonstrated the benefits to be gained from a more intermodal approach to transportation. Arizona, for example, has converted an 18-mile stretch of interstate in the Phoenix area from a “freeway” to a “transportation corridor” in order to enhance mobility around downtown Phoenix by keeping freeway traffic off city streets and to increase the accessibility of the downtown community to individuals and businesses. This corridor includes high occupancy vehicle (HOV) lanes, exclusive HOV ramps and interchanges, and pedestrian overpasses as well as a median reserved for future mass transit use and space in Phoenix reserved for an express bus terminal. Funding was also provided for

**To create an efficient transportation system requires interagency and intra-agency cooperation in planning, funding, and policy-making. But the federal transportation effort is fragmented today at both the administrative and legislative levels.**

mass transit and carpool services during construction of the project. The centerpiece of the new transportation corridor is a tunnel that runs directly under downtown Phoenix—built so that the new transportation corridor would not disrupt the downtown community. The express bus terminal will be located inside this tunnel, with elevator service to carry bus riders up to street level.

The state of Maryland took a similar intermodal approach in addressing a congestion problem in a major travel corridor that feeds directly into Baltimore. A six-lane freeway for rapid transit was constructed from Interstate 695 to the Owing Mills Boulevard interchange; this included park-and-ride lots along the freeway, transit tracks in the median strip, and a rapid transit station with parking lots along the Owing Mills interchange. The state credits the project with reducing severe congestion during hours of peak usage.

Yet another intermodal project is now being completed in Savannah, Georgia at the Georgia Port Authority's container handling facility. The old bridge across the channel leading to the container port had caused serious problems. Because the bridge was low, several large ships had hit its spans; and it was expected that the bridge would be unable to accommodate the new generation of container ships. In recent years, the container port had contributed billions of dollars to the local economy and helped to make Savannah one of the nation's leading load centers. To ensure that future revenues would not be jeopardized, in the early 1980s the Georgia Department of Transportation, in conjunction with state and local officials, planned to replace the bridge, making it higher and with broader spans. The replacement cost was \$90 million, which would have totally absorbed the state's annual apportionment under the federal-aid bridge program, at the expense of all other bridge repair and replacement projects. Therefore, the state obtained \$54 million in federal demonstration project funding. To that sum it added \$10 million of its federal-aid bridge allocation for 1987, the year construction began, and another \$26 million contributed by the state and by local governments. According to the Commissioner of the Georgia Department of Transportation, the first of the new, larger ships is expected to enter the port this spring.

## **The federal role**

Exactly what role the federal government should play in encouraging intermodal approaches to transportation is subject to debate. Some see a need for the federal government to serve as facilitator, ensuring that institutional impediments to cooperation among the modes are minimized. Others think the federal government should take a more active part by providing funding incentives that would encourage intermodal thinking by state governments and the private sector. Still others see an opportunity for the government to superimpose policies specifying the modes that should be used to meet specific transportation needs.

This is not to suggest that an intermodal approach can by itself take care of the nation's transportation problems. It cannot: Sustained federal investment in infrastructure must remain a priority. At the same time, though, *how* we spend money is as important as *how much* we spend.

And how we spend money on transportation infrastructure is to a large extent determined by the priorities established in Washington. In many ways, this is appropriate, since the nation's infrastructure needs to be comprehended as one interconnecting system. As the Congressional Budget Office has stated in discussing infrastructure development, "Federal programs in highways, airports . . . were undertaken because no other jurisdiction could plan a system of such facilities from a national perspective."<sup>6</sup> For example, without some central organization such as the federal government overseeing structural consistency in highways and bridges, the surface transportation infrastructure might have been built to varying standards across the nation. Furthermore, a locality would have no incentive to finance or coordinate an infrastructure project of national benefit if the costs to that community exceeded the benefits that community could hope to reap. Therefore, federal involvement in such infrastructure projects has often been essential. Given that the benefits to be derived from intermodal approaches to transportation problems are also often on a national scale, the federal government will most likely have to be involved in many intermodal projects as well.

The intermodal approach cannot by itself cure the nation's transportation problems. Sustained federal investment in the infrastructure must remain a priority. But at the same time, *how* we spend money is as important as *how much* we spend.

There are signs that the federal government is beginning to see the need for intermodal strategies. An example is in the area of high-speed passenger rail service, an excellent candidate for relieving congestion on intercity highways and air routes. One high-speed technology, magnetic levitation (maglev), enables vehicles to travel safely and at high speeds (approaching 300 miles per hour) while suspended above a guideway by magnetic fields. Through the early 1970s, the United States led the world in research on maglev and other high-speed ground transportation. But when federal funding for research dwindled, Germany and Japan gained the lead. The results of their efforts are now nearly ready for commercialization; the major maglev systems being proposed for regional use—between California and Nevada, for instance—would rely on foreign technologies.

The federal government's attention to this promising technology has resurfaced, however. In the closing hours of the 100th Congress, legislation was passed permitting the sale of tax-free bonds to finance high-speed passenger rail projects—something that is routinely allowed for other transportation projects, such as airports and ports. For fiscal year 1991, federal funding for maglev development includes \$9.65 million for the National Maglev Initiative, a coordinated effort between DOT, the Army Corps of Engineers, and other federal agencies with interest or expertise in maglev technology. This initiative will review the safety and engineering requirements of maglev, examine its potential environmental and economic impacts, and assess the role it might play in the transportation system. In addition, the Federal Railroad Administration, which has lead responsibility for federal maglev projects, awarded \$250,000 in 1990 to the California-Nevada Super Speed Train Commission for feasibility studies of a proposed Anaheim-to-Las Vegas link. With these actions, the federal government may be taking

its first small steps toward devising intermodal solutions to problems involving the nation's transportation system.

## An agenda for action

Much more remains to be done, of course. The federal government should work with states and localities to develop an integrated transportation plan that distributes investment *across* rather than *within* modal lines. Funding mechanisms should be more closely aligned with the needs of a transportation system conceived as a network of air routes, highways, and mass transit systems. And the organizational impediments to intermodal decision-making that now exist at the federal level should be removed. Transportation must be regarded as a coordinated system designed to move people and goods by the mode best suited to the particular purpose at hand. With this vision, federal, state, and local planners can do much to compensate for the current scarcity of budget resources. •

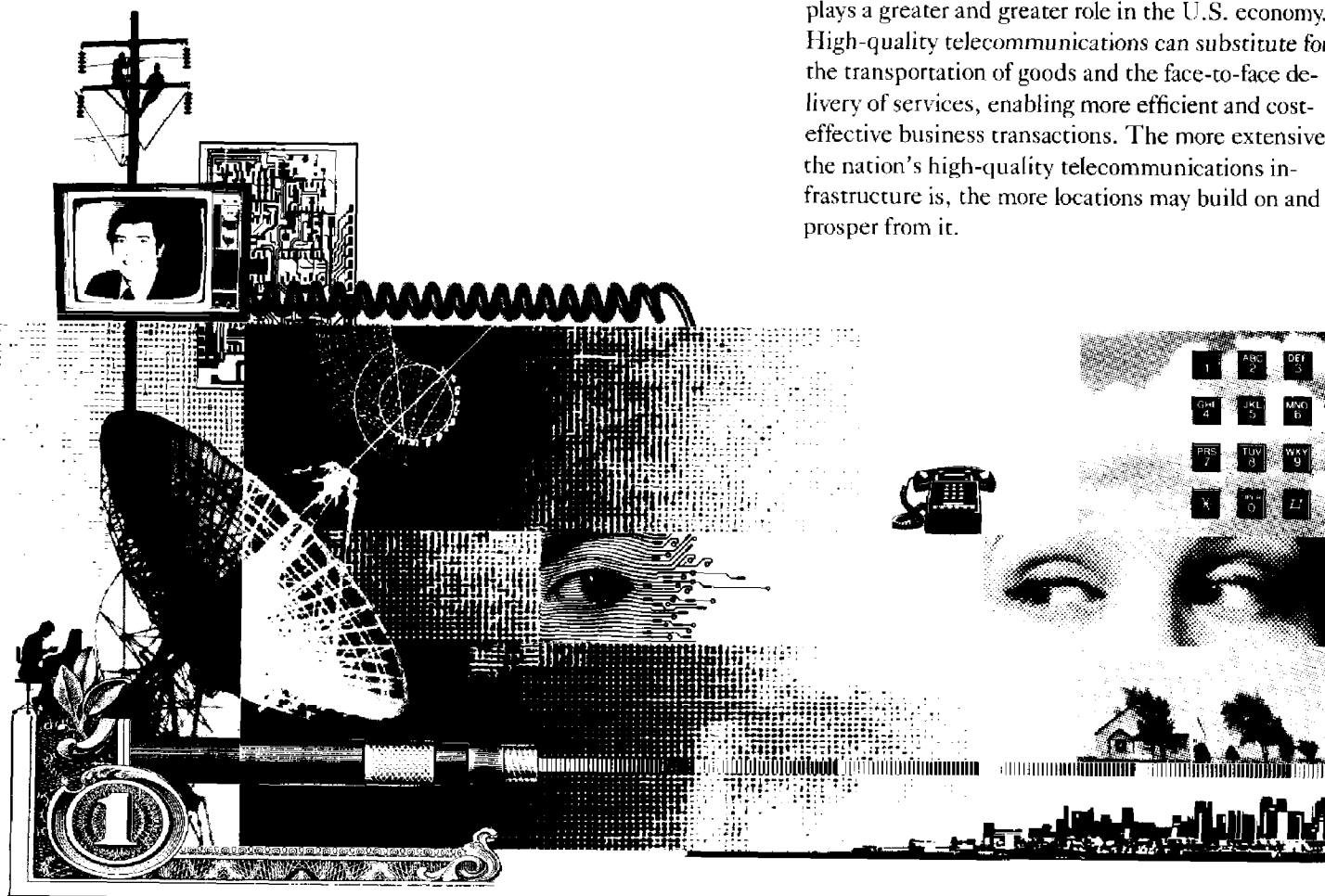
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Gail Garfield Schwartz

# U.S. TELECOMMUNICATIONS POLICY: DEMAND DICTATES SUPPLY *High-tech telecommunications will require huge investments. Why not test the market first?*

**L**IKE RIVERS, ROADS, railroads, and air routes, telecommunications networks are essential to economic growth and regional development. This is especially the case as information plays a greater and greater role in the U.S. economy. High-quality telecommunications can substitute for the transportation of goods and the face-to-face delivery of services, enabling more efficient and cost-effective business transactions. The more extensive the nation's high-quality telecommunications infrastructure is, the more locations may build on and prosper from it.



Recent advances in telecommunications allow extraordinarily sophisticated manipulation of material sent over telephone lines. In book production, for example, author, editor, and publisher in three different locations can use telephone-transmitted video-screen images to confer without travelling—and the book can be sent over telephone lines to yet another destination for printing. A doctor can view pathology slide images sent from a faraway lab and confer with remote colleagues about a diagnosis. A home shopper can examine the weave and color of a fabric; scholars can access many distant libraries from their computers; engineers can design bridges in Africa from their homes in Iowa, using statistics transmitted over the telephone. Brokers', bankers', and insurance agents' business depends uniquely on fast data transfer. The full capabilities of modern telecommunications systems have only been hinted at—but the most advanced applications could save Americans time and money in their daily business transactions, improve education and health care, reduce expenditures on transportation and fuel, and further encourage new businesses based on electronic communication rather than hard copy.

But the entire telecommunications infrastructure does not yet provide for universal use of such sophisticated services. As a result, certain industry and government officials are calling for "development policies" for the telecommunications infrastructure. Local telephone companies (telcos) have invested time and money advocating infrastructure investment; several members of Congress have introduced bills bearing on this issue; and the heads of the National Telecommunications and Information Administration (NTIA) and the Federal Communications

Commission (FCC) have made this a main concern of their respective agendas. Some of these advocates claim that specific policies to rapidly upgrade the infrastructure are needed to ensure that American businesses—both telecommunications firms themselves and information-intensive businesses—are not disadvantaged in the global economy. They argue too that an upgraded telecommunications system will boost local economies and is a "must" for an information-rich society.

These are worthy considerations, of course. That does not mean, however, that the latest technologies should immediately be installed everywhere in the nation. To determine whether telecommunications "development" policies are needed and, if so, just what those policies should be, it is important to state explicitly what benefits are being sought and how these benefits may be attained in a cost-effective manner. Before massive expenditures are committed to the telecommunications infrastructure, we need a much clearer idea than any advocates have yet presented of what the modernized system will do for our society. Economic theory and practical experience both suggest that demand for information services should exist before expensive equipment for supplying them is purchased.

If this were the only issue to be addressed, it would be hard enough to settle upon a reasonable course of action. But the difficulty is compounded by the fact that many competing providers have a big stake in the outcome. Two major industries—the staid old telephone industry and the brash young cable TV industry—each want the opportunity to get into the other's business, while broadcasting and publishing companies want to limit their exposure to competition from either.

In my opinion, the competing claims of telcos and cable companies—the two types of land-line providers—must be resolved on a market basis that responds to the needs of consumers rather than the strategies of suppliers. Instead of trying to carve up markets and allocate them segment by segment to different providers—for example, transport only to telcos, programming only to cable TV companies and broadcasters—policymakers should create conditions under which all providers may strive to serve

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as many customers as possible. The right systems for doing this will be developed as demand evolves.

## **America's current telecommunications system**

To put the future in proper perspective, let's look at what allegedly needs to be upgraded. The United States already boasts the world's most ubiquitous and reliable public telecommunications network. The U.S. public telephone system connects some 93 percent of households and virtually all businesses. Since the 1984 breakup of AT&T, long-distance service (provided by AT&T as well as by other companies such as MCI and Sprint) has become quite competitive. Local service is still provided by regulated investor-owned monopolies that are obligated to serve all customers within their service territories. The Bell operating companies are the giants among the nearly 1,400 local service companies, and in many places, they face a healthy and growing competition for certain services. Competition helps make telecommunications service a relatively good bargain, lowering prices and improving the quality of service offerings. And even in telecommunications markets that still lack competition, both service and price levels compare favorably with those in most other countries.

This communications bargain is supplied by a network comprised of transportation routes and switching centers. The switching centers aggregate and route traffic. Transportation routes consist of trunk lines between switching centers, and subscriber lines from customers to central offices. Subscriber lines are the core of the local service monopoly; and though radio transmission is potentially an alternative method of accessing the network, for now local companies control the access bottleneck. The value of this network lies in the ubiquitous access it offers, boosted by the number and type of services it can provide. These, in turn, depend upon network engineering.

Today's engineering is geared to the "smart" network, with built-in intelligence to maximize the efficiency of information handling. The key elements of the smart network are digitalization and fiber-optics. Together, they enable great speed, great simultaneous capacity, great clarity, and great reliability. In addition, these technologies permit special capabilities such as the ability to store information, to redirect it, to deliver it on demand only, or to deliver it simultaneously to several destinations. Some of the capabilities of fiber-optic lines—such as the ability to transmit X-rays or to allow for interaction between data banks—can also be provided over the old copper cables that used to serve the entire network and still constitute most of the subscriber lines. The old technology, however, is slower, and often it cannot transmit a message of as high a quality as the newer technology can.

Early demand for fiber-optic cable and digital switching was triggered by the huge volume of data that financial and business organizations had to transmit. Although these technologies were initially more expensive than the previous generation of equipment, their costs have fallen as usage has become more widespread; moreover, they offer savings in maintenance and repair, which in many situations has made them cost-competitive with copper cable and analog switching.

So far, however, fiber-optic and digital technologies have been installed mostly where there is high-volume use—that is, on trunk lines and subscriber lines from central offices to businesses or institutions that have a large need for sophisticated information services. The promise of these technologies throughout the network, including the "last mile" to the home, is so alluring that some nations, including Japan and Germany, our principal competitors, have established programs to complete their fiber networks within 10 to 15 years. But these examples can be deceptive: The existing systems in those countries are less advanced than the network in ours, and each country has only one dominant provider, so planned upgrading is a relatively simple matter. Most importantly, they are much smaller, so the bill, compared to the estimated \$500 billion for installing fiber-optic subscriber lines in the United States, is

Rather than trying to carve up markets and allocate them segment by segment to different providers, policymakers should create conditions under which all providers may strive to serve as many customers as possible.

also smaller. Who would provide capital for a \$500 billion domestic investment depends on expectations for realizing a return on the investment.

## **Cost-effectiveness**

**E**xpected return depends on the expected revenues from the new services that would be enabled. Therefore it is crucial to ask: For what information services is the latest technology necessary, and how much demand exists for these services? Other questions follow. Will users willingly pay enough for these services to cover all the costs of the new infrastructure and equipment? If not, how will those costs be met?

To generate revenues to cover investment costs, there is one fundamental requirement: a critical mass of users of the new services the investment makes possible. This is needed not only to ensure economies of scale, but also to create value for customers—and customer value is derived in part from the fact that many users have access to the same services. Therefore to recover its cost, investment in new network capabilities must serve a sufficiently large number of origins and destinations to create that value.

Generally, business users have presented the requisite high level of demand, and it now seems that they can obtain the advanced network capabilities they need. Even in remote areas that do not already have digital facilities, a local exchange company will often upgrade its system at a large user's request. Large users also have the option of communicating directly to long-distance carriers on private fiber-optic lines, either their own or those of alternative transporters such as Teleport.

Residential users, small businesses, educational institutions, and public-sector organizations present an entirely different pattern of demand. It may not be economically feasible to install fiber-optic subscriber loops to serve just one or a few small-volume users, or to replace existing switches with digital switches; unless sufficient demand exists for the services that require these technologies, the additional

revenues would not justify the cost. And, so far, few residential customers have demanded these services. A great many residential users seem satisfied with the single-line, voice-grade, basic service carried over copper cable. For example, in New York State in 1990, only 60 percent of subscribers bought touch-tone service, which provides access to some information services and electronic communication, although the price was only \$2.29 a month. In areas where local carriers offer access to financial, travel, or shopping data, or special services such as call-waiting or call-forwarding (at a charge of \$4 to \$5 monthly), subscription is remarkably low—sometimes as low as 5 percent, and seldom approaching 25 percent. If demand for these relatively inexpensive special services is this low, the assertion that households “need” even more sophisticated services that depend on fiber-optic and digital technology strains credulity.

Because installing fiber-optic subscriber loops would be costly, inattention to the realities of residential demand could result in a significant waste of resources. Investing to upgrade telecommunications equipment would preclude spending to meet other needs. Considering how many clearly identified needs already go unmet in the public and quasi-public sectors, it may be undesirable to take the gamble of installing fiber-optic loops and digital switching centers to serve all American homes.

On the other hand, it is possible that to pass up this gamble could have an enduring negative effect on economic growth and the quality of life in the United States. Failing to exploit the potential of telecommunications technology could be as myopic as overinvesting in it. If no attempt is made to generate a critical mass of usage for the new technologies and services, economies of scale will not be exploited, and it may be infeasible to provide these services where they are clearly needed. It should be kept in mind that initial economic costs could eventually be outweighed by the social gains to be reaped from these services. As occurred with personal computers, an increase in user familiarity with new technology and its applications will most likely make “smart networks” more attractive to small customers. Moreover, average and marginal costs are bound to diminish as volume increases. Therefore,

**As suggested by past experience with the deployment of new technologies, the nation needs more opportunities to demonstrate the utility of “smart networks” in order to encourage consumer demand.**

as suggested by past experience with deployment of new technologies, the nation needs more opportunities to demonstrate the utility of "smart networks" in order to encourage demand.

## **Demonstration projects**

**I**n my opinion, such demonstrations can best be made if government encourages telcos to provide upgraded services to "communities of interest"—those customers who share an interest in high-quality, high-speed information services focused upon a particular subject. Traditionally, telcos have geared their services to specific geographic areas. What I suggest is that this concept now be expanded and altered so that, rather than deploying advanced technologies to customers in physical proximity to each other, companies should instead supply such capabilities to users with common missions, no matter how widely dispersed they are.

Two communities of interest that also serve the public welfare are the health care system and the education system. Both could benefit greatly from expanded access to the high-speed, high-volume information services made possible by fiber-optic and digital technologies.

At present, there are vast inequalities between locations that are well served by hospitals and doctors and locations that are poorly served or unserved. Many smaller communities cannot attract specialists or even young general practitioners, which prevents many patients from obtaining the newest and most sophisticated treatments. This situation could be tremendously improved if fiber-optic networks (supplemented by digital radio in some rural areas) connected medical university personnel, private practitioners, hospitals, and clinics. Health care service could become more widely available, more sophisticated, and less costly. Long-distance diagnosis and treatment could become common, aided by transfer of X-rays and pathology results via high-resolution video over fiber-optic lines.

Similarly, upgraded telecommunications technology could greatly boost the education system. Many

schools lack the financial resources to hire enough good teachers or acquire up-to-date textbooks and audiovisual instruction. But lessons by expert teachers could be beamed electronically into the most remote rural classrooms or the most overcrowded urban schools, supplementing the existing teaching staffs. Moreover, interactive information services could vitalize educational curricula, allowing real-time interactions to take place between teachers and students in any classrooms, no matter how distant, as well as with experts in many different fields. Furthermore, improving education through communications technology could encourage economic growth, since one of the nation's most serious problems is its labor force's inability to meet the needs of an information-based economy.

This "communities of interest" approach would be a good way to measure the cost of providing new telecommunications services and to test methods of paying for the initial investment. The costs would be limited; economies of scale could be achieved; and the critical mass of users associated with the communities of interest would ensure the needed minimal revenues. Therefore, the risk would be relatively low while the potential benefits could be great.

The state regulators who set rates for local telephone companies would have a major role to play in these kinds of demonstrations. Because they control the pace and extent of telephone companies' recovery of their capital costs, these regulators have great influence over the deployment of new technologies in the local network. State and local governments could also play a part, working with suppliers and users to create joint ventures that would be financed by usage contracts, self-taxation, or other means.

The federal government could also help encourage these investments by permitting co-ventures of regional telephone companies (which normally would be forbidden under existing laws), by allowing local telephone companies to provide services that otherwise might be prohibited by the consent decree that broke up AT&T, and by making loans available to public client institutions. For specific applications, such as transmission of video images for medical purposes, financing might be provided by a national or multistate nonprofit organization or

**Telephone companies ought to supply advanced technologies to "communities of interest" whose members have common missions, no matter how widely dispersed they are.**

by a for-profit consortium that includes beneficiary physicians or hospitals.

The "communities of interest" approach does not preclude other approaches. For example, a few states and localities are conducting geographically based experiments: Telcos have installed fiber-optic loops in a few areas in order to test consumer response. At this point, that response is somewhat difficult to assess in part because there are few services with which consumers may connect. How much an increased supply would trigger an upsurge in demand is still an open question.

Another way to explore potential demand while minimizing costs is to experiment with community-center hookups rather than household hookups. It might be cost-effective to install fiber-optic lines to such destinations as public libraries, schools, or town halls, where citizens could gain access to electronic information services. It may also prove economically feasible for small businesses to play a similar role, much as they now offer photocopying and fax services. Already, entrepreneurs have explored the possibility of opening minitheaters that offer high-resolution television provided over the telecommunications network.

For each of these alternatives, there are various ways of recovering costs. The customers who benefit from new information and entertainment services could agree to pay higher-than-average rates, or even to tax themselves on a community basis to pay for the needed investments in infrastructure and equipment (some communities now tax themselves to finance enhanced 911 emergency service). Alternatively, legislatures or regulators could mandate that the costs of new investment be recovered in the rates paid by all telephone customers, not just those receiving information services. Or telcos' shareholders could fund investment, provided they were allowed to keep all resulting profits.

These approaches share one crucial advantage: They would almost certainly prevent overly optimistic assumptions about demand from driving costly investments in supply that subsequently turned out to be unneeded.

Nevertheless, a full test of the market will probably not be possible unless competitors of all types are freed from restrictions on what services they may provide.

## Transmission versus content

The issues involved here are complex, but the basic question is whether telephone companies are to be allowed to provide video and information content. Currently, they are not. The Cable Communications Act of 1984 and regulations of the Federal Communication Commission (FCC) exclude telephone companies from video programming and transmission, and the consent decree that accompanied the breakup of AT&T prohibits the Bell companies from providing information content.

But many local telephone companies have been arguing that, if they were allowed to use the public telecommunications network to transmit video entertainment, the resulting revenue would cover the costs of installing fiber-optic subscriber loops. The result would be a system capable of delivering to American homes not only basic telephone service but also video entertainment and a host of voice and information services. Telcos have petitioned Congress to amend the Cable Communications Act of 1984 (which now gives cable companies exclusive opportunity to deliver nonbroadcast video services) to permit them to carry video signals and even to enter the entertainment programming business. Similar arguments have been presented to the FCC and to state regulators and legislators.

This issue would perhaps have been ignored by Congress and the press if cable TV companies had fulfilled their early promise of providing multiple channels at reasonable prices to many millions of customers. But even though 85 percent of households have access to video over cable, many consumers are dissatisfied because, in their communities, prices for cable service are high or service is poor or the selection of programs or channels is limited. Cable companies that offer poor service have gotten away with it because the 1984 Cable Communications Act does not provide for regulation of the quality or price of cable service in most cases. In areas where local governments permit only one cable franchise, these companies are in effect unregulated monopolies.

In considering if, when, and how telcos should be permitted to provide video, the thorny question is

**A full test of the market will probably not be possible unless competitors of all types are freed from restrictions on what services they provide.**

whether such a change would generally benefit consumers. How many cable customers are so dissatisfied with their present options that they would willingly pay the potentially high costs of receiving video through telcos? And would telco-provided video be a sufficient improvement over cable TV to satisfy these presently dissatisfied customers, even at equivalent prices?

Other questions have to do with the nature of the competition that would result. In theory, any competition would put appropriate pressure on cable TV franchisees, which transport video signals and also provide programming, to improve service and control or reduce prices. But this competition would not be taking place on equal terms if telcos had a guarantee that their basic-service customers would pay for the facilities needed to make delivery of video entertainment possible. The possibility that telephone companies would seek to have basic service customers subsidize their new video ventures is real, and only state regulation can ensure this does not happen. And finally, if the terms of competition between the two industries are to be equal, cable TV companies would need blanket permission to provide not only video, but also two-way communications, an option now permitted only in certain limited circumstances.

At this writing, the FCC is considering new ways to regulate cable TV companies, some of which would affect these companies' potential to compete with telcos. This is a less desirable approach than the other choice—namely, enhancing the ability of both cable companies and telcos to compete with each other. One possible arrangement is to alter the traditional separation between carriage and content.

In the case of telcos, this would mean they would be permitted to offer content and to keep all profits derived from this programming; yet at the same time they would be allowed to price transmission on fiber-optic loops at levels no higher than those appropriate for copper loops. Telcos would also be required to offer common-carriage services on equal terms to all content providers, including their own subsidiaries, which they could not favor in any way. Under this scheme, the telcos would decide whether to invest in fiber-optic loops strictly on the basis of economic considerations. Such an arrangement would prevent telcos from abusing their newly

gained privileges. If cable TV companies were free to provide two-way communication services at will, the competitive field would be level for all players, and cable companies would also make economic investment decisions.

To be sure, this approach is not what the telcos now ask for, nor is it what cable TV companies seek. But it would be a reasonable, market-based compromise that meets the test of reality while protecting consumers from potential harm.

## **Market principles work**

Whatever specific regulatory changes are made, federal, state, and local policy should focus not on increasing the supply of services but on increasing the *demand* for them. Developing "communities of interest" would allow for coordination and integration of dispersed sources of demand as well as limited subsidy of that demand and seeding of investment. Demonstrations of the utility of information services should trigger broader demand for them. If the market for certain information or entertainment services became large enough, it could ultimately be supplied both by telcos and by cable TV companies.

The key ingredient in this scenario is an emphasis on generating and augmenting demand for services rather than on installing infrastructure *per se*. The approaches I have outlined would allow the United States to test the interactions between technical feasibility, consumer demand, and investment costs in the marketplace over a period of years. This would help ensure that the newly installed telecommunications infrastructure would match the demand for services, which should prevent us from ending up either with excess capacity or with unsatisfied consumer demand. Such market tests should also help the United States reap the full economic benefits that telecommunications technologies have to offer—benefits that could play a key role in boosting the nation's overall economic standing. •

**Market tests would help the country reap the economic benefits that telecommunications technologies have to offer—benefits that could play a key role in boosting its economic standing.**

*Charles A. Bowsher*

# MAJOR ISSUES FACING THE 102nd CONGRESS

*From controlling the deficit to rethinking defense,  
the biggest policy challenges still remain.*

**T**OWARD THE END of the last presidential election campaign, we at GAO issued a series of 26 *Transition Reports*<sup>1</sup> in which we sought to alert the new president and the incoming Congress to the challenges facing the nation and its political leadership. We identified dozens of problems, none of which would be easy to solve, many of which, in fact, had been decades in the making. And although we tried not to underestimate their severity or the effort that would be required to remedy them, we find now that many of these problems were even more serious and intractable than we first thought.

Almost two-and-one-half years after issuing our *Transition Reports*, can we report much progress? In a few exceptional cases, yes. But by and large, the much greater share of the nation's problems—including some of the most important ones—have gotten worse, not better. To cover all of them would make for a long and discouraging essay. Instead, I want to highlight a few items—including several in which there have been some encouraging developments—that are both important and in some sense typical of the situation today.

I will discuss the state of the economy and the federal deficit first. The reason is that our inability to control the deficit, and the effects of that failure on the performance of the nation's economy, have made solving the nation's other problems all the more difficult.

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## The federal budget

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In 1988, we voiced our concern over a consolidated federal budget deficit of \$155 billion. In 1990, that deficit soared past \$220 billion. In 1991, it will probably reach \$300 billion or more. Yet even these astronomical numbers understate the magnitude of the challenge that confronts the nation's leaders. We noted back in 1988 that the general fund deficit—a figure that excludes the surpluses in the Social Security and other trust funds—had reached \$252 billion and appeared headed for \$300 billion by the early 1990s. Some who heard us thought we were being too gloomy. But events made our projections look optimistic. The general fund deficit sailed past the \$300 billion mark in 1990. It is headed for \$400 billion or more in 1991.

Congress has been struggling with this problem. The legislation that emerged from last October's budget summit agreement involves real savings of substantial size. If the problem had stood still, the agreement would have brought the nation substantially closer to an appropriate long-term fiscal policy. But unfortunately, the problem didn't stand still. Even as the budget summit negotiations were proceeding, the budget deficit was surging due to the softening economy, the escalating costs for deposit insurance, and the military buildup in the Persian Gulf.

Now, as the nation emerges from a war while at the same time still caught in a recession, the fiscal situation is deteriorating even further. It now seems clear that the savings achieved in the budget legislation will not, as some had thought when the agreement was enacted, produce budget surpluses by 1995.

Why? The baseline deficits for 1990 and 1991, taken together, increased by about \$300 billion in the months from the release of the President's budget in early 1990 to the passage of the deficit reduction legislation last fall. The cost of the war in the Persian Gulf, recession at home, and further increases in the cost of deposit insurance could cause *an equal or even greater surge* in the deficit over the next few years.

## The economy

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The federal budget deficit has had both short-term and long-term implications for the nation's economy. The budget deficit was the primary cause of the persistent trade deficits of the 1980s, simply because the budget deficit consumed so much of the nation's savings that capital had to be imported from overseas. Over the longer term, the budget deficit, coupled with a low domestic savings rate, will constrict the opportunities for domestically financed economic growth. This will ultimately take its toll on the nation's standard of living.

But the deficit holds more immediate and ominous implications for an American economy now in recession. One of the traditional strategies available in time of recession has been to stimulate the economy by increasing the budget deficit. It is axiomatic, of course, that the recession will spur an increase in the deficit automatically, due to the decline in revenues and the increases in some spending programs that come with it. If we are fortunate, the current recession will be

mild and short-lived, in which case this automatic fiscal stimulus—along with the relaxation in monetary policy now under way—will turn out to be all that is needed. But despite optimism spurred by the brevity of the Persian Gulf war, there are reasons to wonder if we will be so lucky. At no time since World War II has the United States entered a recession with its financial institutions in jeopardy and with such a burden of debt—both public and private—weighing on the economy. These and other factors may cause the current recession to be deeper and more prolonged than many have forecast, and the recovery to be slower. If that happens, and we find our flexibility to make fiscal policy decisions constrained by already enormous deficits, we may have yet another reason to wish that we had dealt effectively with the budget deficit at an earlier time, under more favorable circumstances.

Those who said that this nation should deal with the deficit while the economy was strong have been proven correct. Delaying has only made the job more difficult.

## Defense

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The disintegration of the Warsaw Pact permits—indeed, it requires—a fundamental reexamination of the national security policy that has determined U.S. defense budgets for the past four decades. The force structures and weapon systems that were appropriate for the Cold War may not be appropriate to the environment in which the United States now finds itself. A little more than a year ago, there was evidence that the necessary reassessment was beginning. But much has happened since then. Although the Budget Summit agreement incorporated a downward trend in real defense spending, the extent to which that will be implemented through the sort of reexamination we believe will be needed remains to be seen. The remarkable success of the forces involved in Desert Storm has already prompted suggestions that we delay—perhaps permanently—the planned reduction in force structure that was at the heart of last year's budget agreement.

In the past few years, more and more people have come to acknowledge one of the key defense problems we raised in the *Transition Reports*—that the United States cannot afford all the new weapon systems that have been proposed. We at GAO have stressed not only that tough choices would need to be made among systems under development, but that progress on the systems that do go forward should be slowed down from the highly concurrent pace of the 1980s. The performance of these weapon systems should be fully tested before we invest in their production.

We were all justifiably proud of the performance of the weapons employed in Desert Storm and of the skilled and dedicated men and women who operated them. But pride in our troops and the necessity to support their efforts should not blind us to the management failures, the cost growth, and the unresolved affordability issues that continue to plague the development of the nation's weapon systems.

The Navy's well-publicized problems with the A-12 bomber, leading to the decision to terminate the program, provide one example, but other programs

have suffered cost growth and schedule slippage as well. These include the Air Force's B-2 and C-17, the Navy's T-45 trainer, and the Army's fiber-optic guided missile. Problems such as these, particularly if they emerge in a period of more tightly constrained defense procurement budgets that make it difficult to absorb cost overruns, could well mean that Congress will be faced with calls for bailouts similar to the Lockheed affair in the 1970s. Some portion of the munitions that were expended in the Persian Gulf war, including the Tomahawk cruise missile, the Patriot surface-to-air missile, and other systems, are likely to be replenished. But the replenishment of inventories will not solve the problems of defense firms that face a loss of business if major weapon systems are cancelled.

## Financial institutions

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**O**ur *Transition Reports* underscored our concern over the cost of restoring stability to the thrift industry. When the reports were issued, the Federal Savings and Loan Deposit Insurance Corporation was hopelessly insolvent and unable to pay the estimated \$50 billion in additional costs required to resolve failed and failing institutions. It became widely recognized that action had already been postponed too long. Fortunately, in passing the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA), Congress made a start toward building a framework in which the crisis might be resolved. More reforms are needed—reforms affecting internal controls, accounting, and auditing—but the critical first steps have been taken.

Meanwhile, however, the costs have continued to rise. We now estimate that the total bill for resolving the thrift industry crisis will reach \$370 billion. If additional institutions fail, that figure could grow to \$400 billion. If the nation experiences a severe recession, it could reach half a *trillion* dollars. Numbers such as these can be overwhelming. Yet we must not let the enormity of the numbers bring the resolution process to a halt. Insolvent institutions that continue to operate run up additional losses that add directly to the eventual costs of resolution. We have learned in recent years that to delay action on such problems merely compounds the eventual expense.

That lesson is equally applicable to recently disclosed problems in the banking industry and in the Bank Insurance Fund (BIF—the new name for the old Federal Deposit Insurance Corporation Fund). In September 1990, we reported that, as of the end of the previous year, BIF had potentially more than \$6 billion in unrecorded liabilities associated with a number of large banks. We noted that a recession could spur further bank failures, leading to losses that could deplete BIF. Congress responded by eliminating the assessment rate restrictions in FIRREA. This is a sound first step, but additional actions will be needed to recapitalize BIF. So will other reforms to strengthen both BIF and the banking industry as a whole. (These issues are discussed in greater detail in a recent GAO report on the deposit insurance system.<sup>2</sup>) If sufficient resources cannot come from the banking industry itself, then taxpayer support may turn out to be a necessity.

## Health

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In our *Transition Reports*, we noted the high and rising costs of Medicare and Medicaid. Progress had been made in recent years on some issues, such as ensuring greater equity in Medicare prospective payment systems for hospitals, and in conducting the research needed to develop guidelines for physician services.

But it is obvious that the problems in our health care system go deeper than this. The effects of health costs on the federal budget constitute but one symptom of an overall health care system in need of fundamental reform. The United States spends 11 percent of its Gross National Product on health care services, a share that is expected to grow to 15 percent by the end of the decade, and one that is higher than in any other nation. But we are not getting our money's worth. Those with access to the American health care system receive the best medical care in the world. But some 30 million people or more—around 15 percent of the population—have difficulty gaining access because they lack health insurance. (That number will probably rise as people are laid off in a recession.) And measurable health outcomes are not what one would expect in a nation that spends as much on health care as we do. Life expectancy in the United States is on a par with other industrial nations that spend far less, while our infant mortality rates are far higher.

## Transportation

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Our *Transition Reports* identified a number of challenges facing the newly appointed Secretary of Transportation, including the need to come to grips with an overstretched and deteriorating transportation infrastructure. The Department of Transportation (DOT) developed a national transportation plan, the first since the Department was established a quarter of a century ago. The plan was a significant achievement, effectively articulating both the needs and the consequences of failing to meet them, but still not explaining how those needs will be financed. This will be a major challenge for the 1990s, as highway and bridge needs alone have been estimated to cost half a trillion dollars through the year 2000, dwarfing both DOT's current \$12 billion to \$14 billion per year highway budget as well as the highway budgets DOT has proposed for the next five fiscal years (\$20.3 billion by fiscal year 1996). The administration's new 5-year surface transportation plan, announced on February 13, provides a further opportunity for Congress to focus on the issue (some interesting aspects of which are highlighted on these pages in "The Intermodal Approach to Transportation," by Kenneth M. Mead and Jacquelyn L. Williams-Bridgers).

Our *Transition Reports* also highlighted the problems of the Federal Aviation Administration's (FAA) faltering \$30 billion Air Traffic Control modernization program, which has faced some of the same cost, schedule, and performance problems that have been encountered in Department of Defense (DOD)

weapon systems. DOT has initiated several reforms, including a commitment to test systems before making major financial investments. This is clearly a step in the right direction, but it will take time before any of us can be confident that this huge program has been turned around.

## **Agriculture**

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**S**ince 1985, U.S. agriculture has been moving away from subsidization and toward a more market-oriented system. In 1988, we said that continuation of this trend required greater flexibility in the government's production control programs. The 1990 farm bill provided this flexibility, but the budget summit agreement made the resulting savings contingent on success of the General Agreement on Tariffs and Trade (GATT) negotiations' Uruguay Round. The current impasse in these negotiations may put the savings in jeopardy.

## **Energy**

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**O**ne of the results of the war from which we have just emerged has been to focus our attention once again on our failure to contain the demand for imported oil. We must now try to take to heart the lessons we should have learned from earlier oil crises. The administration recently offered a new proposal for a national energy strategy, and no doubt the debate on energy policy will be joined in short order.

An effective national energy policy would require—among other things—more spending on energy conservation and on research and development. But finding the money to pursue long-term energy solutions will be difficult, not only because of the overall budget situation but because of a host of competing—and in some cases, urgent—demands, such as the need to clean up the enormous environmental, safety, and health problems in the Department of Energy's (DOE) nuclear weapons complex. That process alone will cost, by our estimates at GAO, as much as \$150 billion over several decades. And that process, by the way, will require more than money. It will require some tough decisions about the kind of weapons production capacity this nation will need in the post-Cold War era.

## **Environment**

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**C**ongress reauthorized the Clean Air Act last year. An important accomplishment, yes. But meeting the requirements and deadlines of the act, along with those of other environmental laws, will be costly for the Environmental Protection Agency (EPA), the states, local governments, and industry. Because federal resources are so limited, costs have been shifted to states and localities, many of

which are themselves in dire financial straits, and no more able than the federal government to assume new burdens.

The federal environmental effort faces other problems as well. Operating under a myriad of separate authorities, EPA cannot easily adjust priorities or shift resources to achieve a maximum reduction of environmental risks. At the same time, the lack of adequate research funding inhibits efforts to measure the results of programs—that is, to find out what is working and what is not—or to identify emerging environmental risks.

## Financial management

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**I**n some areas, particularly in the matter of federal financial management, the news is much more encouraging. The enactment of the Chief Financial Officer's Act of 1990 (CFO), under the leadership of the Senate Governmental Affairs Committee and the House Government Operations Committee, was a major step forward. What is required now is that we do justice to the intent of the act, and build a modern financial management structure while putting aside the old and haphazard systems that have not done the job. Getting it done this time will require the determination of agency managers and the sustained oversight and support of Congress.

In this regard we should remind ourselves of another piece of financial management reform legislation, and of how far short it has fallen of accomplishing its goals. The Federal Managers Financial Integrity Act of 1982 (FIA) has never achieved its potential because too many managers have focused more on procedures than on outcomes. With this experience in mind, we should hold top agency managers accountable from the start for achieving the substantive changes envisioned in the CFO act. The changes call not just for better financial data, but for more reliable, more timely, and more useful measures of program performance.

Last year, we at GAO identified 14 areas—among them Internal Revenue Service receivables, DOD inventory management, and guaranteed student loans—in which we believe there may be an especially high risk of large losses to the taxpayer. We are applying substantial resources to examining these program areas—our way of attacking the root causes of waste, fraud, and abuse, rather than just the symptoms. That we must do so, of course, reflects the failure of the FIA process to come to grips with these root causes. We hope to accomplish some of the things we hoped FIA would do, and to reduce the likelihood that we will have to report in the future on scandals of the kind that rocked the Department of Housing and Urban Development two years ago.

## The public service

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**I**n the *Transition Reports*, we expressed our alarm at the growing inability of the federal government to recruit and retain good people. Fortunately, this is another area in which we can cite encouraging developments. The President has

reversed the fed-bashing rhetoric of recent administrations—rhetoric that had such a devastating effect on the image of the public service and on the ability of federal agencies to attract able young people. Equally important has been the support by the executive branch and by Congress for federal pay reform, including higher pay for senior officials and the introduction of locality pay to ensure that the federal government can compete more effectively for talent in locations where the cost of living is especially high.

## **The need for commitment**

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**F**or all the mixed news I have reported here, one development stands out over the past two years: the transformation of Europe, particularly Eastern Europe. Enormous hurdles remain, of course, as the former Warsaw Pact members struggle to build functioning economies and, we hope, stable democratic forms of governance. The new Eastern Europe is not without risk. Resurgent nationalism and the inevitable unrest may threaten these countries and their neighbors. But from the perspective of U.S. national interests, the news is good.

Most would agree that the news was also totally unexpected. Two years ago, almost no one anticipated that we would shortly enter an era in which the U.S.S.R. posed a substantially reduced conventional military, political, and economic threat to the West and the former client states of the Warsaw Pact posed virtually none at all. Even now, no one can say with certainty how much this outcome stemmed from the policies of the United States and its Western allies and how much was the inevitable result of conditions endemic to the Soviet bloc. But what is clear is that, for more than 40 years, the United States pursued a consistent set of policy goals, the containment of communism in Europe; that it pursued these goals in a patient and sustained manner; and that these goals were ultimately achieved.

There is a lesson in this. The nation faces a host of stubborn, perplexing problems. Today's challenges and dangers are perhaps more ambiguous and complex than those of the Cold War, but they are no less real, and certainly no less demanding of our commitment and resolve.

Here it is worth noting another transformation now under way. EC 92 will be a watershed in the economic and political integration of Western Europe. Its approach signals that we are in a new world, one partly of our own making, but one in which our role is changing and our preeminence is no longer assured. We must prepare ourselves, not for military competition with another superpower, but for vigorous economic competition with other economic powers whose vitality rivals, and may eventually exceed, our own. We must equip ourselves for that competition or we will be left behind.



It is time to begin a healthy debate over what is required of our government if the nation is to succeed in this new era. I would like to offer a few suggestions, the importance of which lies in the fact that they are prerequisites to accomplishing other objectives:

- We must have a government that works, one that operates efficiently and effectively, both in its internal functions and in its delivery of services to the American people. To reach this goal, we must begin to invest again in government—in its people, its facilities, and its technology.
- We must have a government whose financial performance relates properly to the national and world economy. For that to be achieved, we must move toward a long-term fiscal policy that recognizes the need for a much higher level of national savings.
- We must have a financial system in whose safety and soundness the American people can have complete confidence, so that our market economy can effectively allocate capital to the most productive purposes. To accomplish this, we must complete the task of resolving the thrift industry crisis, restore the soundness of the banking industry, and ensure an efficient and effectively regulated structure of capital markets.

Other objectives are important, but the ones just mentioned are of overriding importance to assuring the competitiveness of the American economy. Neither the current recession nor the afterglow of the war in the Persian Gulf can be permitted to distract us from these vital long-term goals.

In this connection, 1992 is possibly a key date, perhaps a turning point because of the likely conjunction of events:

- We hope, by then, to have emerged from the current recession. A more vigorous economy would provide the right environment in which to tackle, once more, the budget deficit.
- The war will be well behind us, and we will be able to refocus our efforts on determining the size and shape of our armed forces in the post-Cold War era.
- EC 92 will bring home to us the reality of a new world marketplace in which we must be prepared to compete.

Looking hard at the long-standing problems that face this country, one may argue that in the past two years we have seen some constructive shifts in attitudes, but only slight tangible progress. I am confident, however, that if we can clarify our priorities and commit ourselves to resolving the matters that we agree are most important, there is no reason the United States cannot keep pace with a changing world. •

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1. *Transition Series* (GAO/OCG-89-1TR through GAO/OCG-89-26TR, November 1988).
  2. *Deposit Insurance: A Strategy for Reform* (GAO/GGD-91-26, Mar. 4, 1991).

*Suzanne J. McCrory*

# KEEPING AN EYE ON GOVERNMENT-SPONSORED ENTERPRISES

With the savings and loan rescue still fresh in taxpayers' minds, GSEs are getting a closer—and deserved—look.



**F**OR MORE THAN half a century, federal deposit insurance seemed to stabilize America's banking system at virtually no expense to the taxpayer. But today taxpayers face paying hundreds of billions of dollars to bail out the savings and loan industry—a bailout whose costs are driven ever higher by the recession and the collapse of the real estate market. Because of these high costs, other government obligations are now coming under scrutiny. Are there other ex-

ALTHOUGH GSEs HAVE  
CLOSE FEDERAL TIES, THEY ARE PRIVATE COMPANIES.  
THEY PAY FEDERAL TAXES AND ARE PRIVATELY OWNED  
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IN PRIVATE FINANCIAL MARKETS. AND SOME, BUT NOT  
ALL, ARE FEDERALLY REGULATED.

plicit or implicit government commitments that might suddenly turn into huge taxpayer tabs? What can we learn from the S&L debacle to prevent something similar from happening during the 1990s?

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One area coming in for a hard look is the federal government's relationship to a group of large financial institutions known as government-sponsored enterprises (GSEs). GSEs such as Fannie Mae, Freddie Mac, and Sallie Mae (see table 1) are large, federally chartered financial institutions created to assist certain borrowers deemed worthy of help, such as farmers, homeowners, and students. Toward that end, each GSE is limited to a single line of business—agriculture, housing, or higher education—in which it is supposed to fulfill a specific mission.

Fannie Mae and Freddie Mac, for example, buy loans from banks and mortgage lenders, package them as mortgage-backed securities, and resell them to investors, thereby creating a huge nationwide secondary market for mortgages. Because this market exists, temporary credit squeezes in one part of the country don't prevent home-buyers there from being able to take out mortgages. Furthermore, investments in the form of securities are more liquid—and hence more attractive—than investments in the form of individual mortgages; therefore, more money is available to finance mortgages than there would be in the absence of this secondary market. Sallie Mae serves a similar function for student loans, buying them from lenders and selling them on a secondary market. In addition, Sallie Mae steps in at an early stage by



helping banks to finance the loans it offers to students. Just as Fannie Mae and Freddie Mac have created America's housing market as we know it, Sallie Mae has played an important role in the expansion of postsecondary education that has taken place over the past 20 years.

**Table 1**

**GOVERNMENT-SPONSORED ENTERPRISES (GSEs)**

<i>GSE name</i>	<i>Year created</i>	<i>Market sector</i>
<b>Farm Credit System Banks</b>		
<i>Farm Credit Banks</i>	1916/1988	Agriculture
<i>Banks for Cooperatives</i>	1933	Agriculture
Federal Home Loan Banks	1932	Housing
Federal National Mortgage Association ( <i>Fannie Mae</i> )	1938/1968	Housing
Federal Home Loan Mortgage Corporation ( <i>Freddie Mac</i> )	1970	Housing
Student Loan Marketing Association ( <i>Sallie Mae</i> )	1972	Education
College Construction Loan Insurance ( <i>Connie Lee</i> )	1986	Education
Federal Agricultural Mortgage Corporation ( <i>Farmer Mac</i> )	1988	Agriculture & Rural Housing

Source: *Government-Sponsored Enterprises: The Government's Exposure to Risks* (GAO/GGD-90-97, Aug. 15, 1990), p. 18.

Although GSEs are not federal institutions, they have close federal ties. Each GSE has a federal line of credit on which it can draw in difficult times. Some GSEs, but not all, are federally regulated.

At the same time, however, GSEs are private companies. They pay federal taxes and are privately owned and managed; and some GSEs play important roles in private financial markets. Fannie Mae, for instance, makes possible one in seven home mortgages. Furthermore, GSEs stand behind a huge amount of private debt: More than half a *trillion* dollars is guaranteed by Fannie Mae, Freddie Mac, and Sallie Mae.

Although no law would require the federal government to rescue a failing GSE or to pay off the creditors of a GSE that went under, most investors and financial analysts think that the government would not stand by and let a GSE fail. Are these analysts right? No one knows for sure, but a case can be made that they are. This issue is not just of theoretical interest, for even though no GSE is currently known to be in danger, financial conditions can change suddenly. The time to consider what would happen if a GSE were in serious financial trouble is not when and if that happens, but now.

## **Is the taxpayer at risk?**

**T**o answer this question, we need first to understand some implications of the fact that GSEs are neither fully public nor fully private institutions. Because GSEs operate in private financial markets, their financial condition is assessed by such rating agencies as Standard & Poor's and Moody's. Investors use these ratings to judge how safe securities are and whether their interest rates are appropriate to the risks assumed by those buying them. But, as the rating agencies have told GAO, they rate GSE debt higher than they would rate the debt of a comparable private company because they assume that a failing GSE would be bailed out by the government.<sup>1</sup> That assumption is based on the fact that GSEs were established specifically to promote or achieve purposes that the federal government believes to be socially or economically desirable, and is reinforced by the fact that the government has intervened twice to assist GSEs that encountered financial difficulties.

The recent behavior of rating agencies has indeed been consistent with what they have told GAO. In the early 1980s, Fannie Mae faced some of the interest-rate problems then troubling S&Ls; as a result, it had net losses for four years. But during that time, rating agencies continued to give Fannie Mae senior debt securities the highest investment rating possible—AAA. Another huge GSE, the Farm Credit System, was threatened by the collapse of agricultural land prices in the early 1980s. Yet throughout this crisis, Farm Credit senior debt securities also retained their AAA rating.





Why do the rating agencies assume that the government would rescue GSEs even though it is not required by law to do so?

One consideration is the close ties GSEs have to the federal government through their status as federally chartered institutions. The creditors of a bankrupt GSE could argue that because of these ties the federal government is morally obligated to make good on the failed GSE's debts.

Moreover, the costs of a GSE bankruptcy would probably not fall just on those, such as domestic and international banks, who had invested in GSE securities. If a GSE failure endangered domestic

ALTHOUGH NO LAW WOULD REQUIRE THE FEDERAL GOVERNMENT TO RESCUE A FAILING GSE OR TO PAY OFF THE CREDITORS OF A GSE THAT WENT UNDER, MOST INVESTORS AND FINANCIAL ANALYSTS THINK THAT THE GOVERNMENT WOULD NOT STAND BY AND LET A GSE FAIL.

banks, the deposit insurance funds might be called upon—at considerable expense to the U.S. taxpayer. International banks might exert pressure on the U.S. government to prevent the GSE from failing, also helping to prompt a bailout at the taxpayer's expense. The government might therefore judge the short-term, direct costs of a GSE bailout to be less than the long-term, indirect costs of a GSE failure.

Another factor is the role GSEs play in financial markets. GSEs have shaped certain markets and are essential players in them, operating successfully in many areas of these markets that purely private institutions judge too risky to enter. Consequently, a GSE failure would have a negative impact on its market and potentially on other markets as well. This prospect might encourage the government to take preventive action.

Furthermore, if a GSE were to get into trouble, it would be likely to happen while the rest of the economy was experiencing financial difficulties as well. In that case, the original motivation behind the creation of GSEs—the need to get credit to farmers, homeowners, and students during periods of economic contraction—would gain renewed importance.

The “too big to fail” argument might also come into play. The government bailouts of Chrysler, Lockheed, Conrail, and New York City—all non-federal entities—support the idea that the government would be reluctant to allow any large economic player to go under so long as its survival was deemed to be in the public interest.

In addition to these theoretical arguments in favor of government aid to an ailing GSE, there is also the record of the past decade. For example, during the early 1980s, Fannie Mae found itself in trouble because of the gap between the low interest rates at which the mortgages in its portfolio had been made and the double-digit interest rates it had to pay to attract investors. Congress intervened in 1982 with legislation that changed Fannie Mae's tax situation, resulting in tax benefits estimated to be worth \$25 million.

Around the same time, Fannie Mae's regulator, the Department of Housing and Urban Development (HUD), relaxed the rules regarding the amount of capital Fannie Mae had to hold against possible losses. The move paid off. Fannie Mae continued to borrow from the market at favorable rates and restructured its portfolio by reselling more loans to investors, thereby passing on the risks of future changes in interest rates. During this process of working back to profitability, Fannie Mae did not have to resort to using its federal line of credit. It is questionable whether this would have been possible, however, if Fannie Mae had not had the government's legislative and regulatory support as well as the market's confidence in its future.

Similar support was given to the Farm Credit System institutions, which lend directly to farmers, when they were threatened by the agricultural depression of the early 1980s. Congress gave the System a direct line of credit from the Treasury Department and authorized up to \$4 billion in federally guaranteed bonds for System institutions. To forestall continued financial problems in the Farm Credit System, Congress also made government regulation of the System more stringent—more like bank regulation than it had been before this crisis.

But not every GSE has a regulator with sufficient authority to help correct emerging problems or, if necessary, to close the GSE. This is true, for example, of Fannie Mae, Freddie Mac, and Sallie Mae. If any of these three GSEs were in trouble,



Congress would almost certainly be drawn into the situation. Once Congress was involved, pressures for a bailout would probably build.

Let's look at how such a scenario might play itself out. Suppose one of the three large GSEs that lack strong regulation suddenly begins posting large losses. Since the ratings of GSE securities don't immediately signal the market that the GSE is in trouble, investors don't realize these securities are risky investments. The GSE keeps borrowing as it slides toward insolvency. (In fact, GSE managers and owners would have an *incentive* to borrow and to take last-ditch risks, since they could assume that if the GSE failed the burden would fall on U.S. taxpayers. These last-minute actions would add dramatically to the cost of any later government bailout.)

At a certain point, the GSE announces that it is on the verge of insolvency. Domestic and international banks holding GSE securities in large amounts warn that a GSE failure will drag them down as well. Fearing disruption in financial markets, the president and Congress agree on a bailout.

## **Regulation: Too little could be too late**

In the past, financial difficulties at government-related institutions have prompted regulatory changes. For example, in response to both the S&L situation and the Farm Credit crisis, Congress has strengthened government regulation of these particular entities. This provides the government with an early warning system of financial trouble. It can then take actions to prevent institutions from persisting in risky practices, to change institutions' management, or to restructure institutions.

Before 1985, however, neither the S&Ls nor the Farm Credit System were well-regulated. In the case of the Farm Credit System, the government had little awareness of financial difficulty until it had reached crisis proportions. On the other hand, the government was aware of problems in the S&L system, but there were not enough government examiners to monitor the S&Ls; furthermore, those

that were on the job did not always take action when needed. Regulation of both the Farm Credit System and the S&Ls suffered from an additional problem: Regulators had a dual role, which worked against their taking appropriate regulatory action. The Farm Credit Administration, for example, was both the overseer and the promoter of the Farm Credit System. Similarly, the Federal Home Loan Bank Board was supposed to supervise S&Ls at the same time that it was supposed to promote the industry. Such dual missions can create conflicts of interest for a regulator, with serious (and expensive) consequences. It seems reasonable to assume that stronger, independent regulation could have, at the least, kept down the size of the taxpayers' bill for the S&L bailout by preventing last-ditch gambles by S&L owners and managers. And better regulation might have given the government a chance to intervene and resolve the problems of the Farm Credit System before a crisis developed.

Current regulation of the three large GSEs that cannot be closed or assisted without congressional intervention has some disturbing similarities to the precrisis regulation of the Farm Credit System and the S&Ls. For one thing, Fannie Mae and Freddie Mac's regulator, HUD, has the dual role of overseeing their financial activities and of ensuring that they continue to promote low- and moderate-income housing, as originally chartered. In addition, HUD's historical record as a monitor of financial activities has not been encouraging. It has not historically taken an active role in monitoring Fannie Mae's condition; in fact, in 1981, it disbanded its Fannie Mae oversight unit. And even though HUD has had authority to audit Fannie Mae since 1968 and Freddie Mac since 1989, it has never done so. It did gear up its regulatory efforts in 1990, but the administration appears to favor moving regulatory responsibility for Fannie Mae and Freddie Mac elsewhere. Furthermore, like the Farm Credit System's regulator before 1985, HUD has little explicit authority to stop Fannie Mae or Freddie Mac from continuing any risky practices HUD might identify. In the case of Sallie Mae, the regulatory situation is even weaker: Sallie Mae has *no* federal regulator to oversee its financial activities.

At present, Fannie Mae, Freddie Mac, and Sallie Mae do not appear to be in any sort of financial danger. But if they were, the stakes would be



large. At the end of 1989, Fannie Mae's portfolio of loans and guarantees amounted to \$336 billion and Freddie Mac's to \$287 billion; Sallie Mae's portfolio of loans was worth \$35 billion.

## **Regulation: What should be done?**

Since it seems that neither the market nor current regulation can be counted on to give early warning of financial trouble at GSEs, the logical step is to strengthen their regulation. How should this be done? GAO believes that the post-crisis regulation of the Farm Credit System and the S&L industry can suggest a number of general principles:

- *Set minimum capital levels that are based on risk.* Certain GSEs do have to hold a minimum amount of capital, but this amount, typically set by law, is unrelated to risk. The situation is different for private institutions. If a private institution dips into its capital, investors will likely demand higher interest rates as compensation for the perceived

monitoring would be the linchpin of an effective early warning system.

- *Impose sanctions on GSEs found to be operating in an unsafe manner.* Sanctions are the teeth of regulation. Without the threat of sanctions, regulators are unlikely to be able to force GSE owners and managers to change risky behavior.

Although these regulatory principles are modeled on those that have been applied to banks, their specific features could be adapted for GSEs. Regulations would need to be customized in recognition of GSEs' particular characteristics. For example, unlike banks, GSEs are restricted to only one line of business, and are involved in nationwide markets, which makes them less vulnerable to local or regional financial problems than banks are. In addition, GSEs need to be flexible and innovative in order to fulfill their missions of supplying credit to specific economic sectors of national importance. Consider, for instance, the importance of Freddie Mac's and Fannie Mae's leadership in expanding the role played by mortgage-backed securities in housing finance. These securities have attracted capital into the mortgage market and also reduced the GSEs' exposure to the risks that arise from changes in interest rates.

Overall, GSE regulation should be flexible enough to permit GSEs to take the risks they need to take but strong enough to protect the taxpayer from adverse consequences. Customized, non-intrusive, and not overly detailed regulation would seem most appropriate for Fannie Mae, Freddie Mac, and Sallie Mae, which are well-established and currently profitable institutions. More active oversight, however, might be exercised if and when they undertook new, potentially more risky ventures. In any case, effective monitoring of the financial conditions of GSEs would be key, with early, active oversight at the first sign that a GSE's financial condition is deteriorating.

Exactly what kind of regulation GSEs should have—as well as who should do the regulating—can be debated. But fairness to the taxpayer demands that GSEs should be better regulated than they are today; and now, while GSEs are profitable, is the time to debate what kind of regulation would work best. ♦

### **FAIRNESS TO THE**

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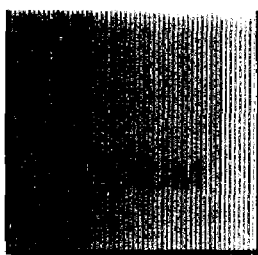
higher risk. GSEs are currently spared this market discipline because (as discussed earlier) rating agencies give GSE securities high marks regardless of the GSE's financial condition. Greater discipline at GSEs could be achieved if the minimum capital levels they were required to maintain were based on the types of risks they were taking.

- *Establish rules that limit risk-taking.* Such rules would prevent GSE owners and managers from taking speculative risks and therefore would be likely to help keep a GSE's financial difficulties from reaching crisis proportions.

- *Monitor the financial condition of GSEs.* Such



1. *Government-Sponsored Enterprises: The Government's Exposure to Risks* (GAO/GGD-90-97, Aug. 15, 1990), pp. 84-85.



*Elliot L. Richardson*

# THE VALUE OF EVALUATION

*In Chantilly, Virginia: The 8th Annual GAO  
Management Conference, November 28, 1990*

*One of the nation's most respected and widely experienced public servants, Elliot L. Richardson has been Secretary of Health, Education, and Welfare; Secretary of Defense; Attorney General of the United States; Secretary of Commerce; and Ambassador to the Court of St. James's. He has lent his judgment and expertise on many important issues to government at the state and federal levels. His writings include The Creative Balance: Government, Politics, and the Individual in America's Third Century.*

*Currently Senior Resident Partner in the Washington Office of Milbank, Tweed, Hadley & McCloy, Mr. Richardson is also a member of the Comptroller General's Consultant Panel and recently became Chairman of GAO's Quality Control Review Board. Last November, he spoke before the 8th Annual GAO Management Conference on the importance of program evaluation. This article is adapted from his remarks.*

**W**HEN I SPOKE recently on the urgent need to rebuild the public service, I drew the contrast between today and those earlier times when people came to Washington in hopes of bettering the lives of their fellow Americans. A major goal of the New Deal, after all, was to address the galaxy of human needs that until that time had been neglected at all levels of government. The same drive manifested itself later in the Fair Deal, the Great Society, and the War on Poverty. To be a part of any of these efforts was to experience a sense of idealism and service, a feeling that government was undertaking experiments that would challenge its capacity to better some of the most keenly felt deficiencies in American society.

But the problem with these efforts was that, while they substantially reshaped the role of government, they eventually generated a level of expectation they could never fulfill. This was a matter that deeply concerned me when I became Secretary of Health, Education, and Welfare (HEW) in 1970, early in the Nixon administration. At the time, HEW was still tending toward bigger and better programs to respond to a host of unmet social needs. But it became very apparent to me, even in the first months following my arrival, that we were overpromising. I tried frequently to convince my colleagues at HEW that we would eventually need to choose among the many claims on our limited resources, and that in order to do so with some measure of rationality, we would need to focus far more than we had been doing on identifying the programs that actually improved people's lives.

There is a way of dramatizing just how limited our resources were. I asked my staff late in 1971 to estimate how much it would cost in fiscal year 1972 to extend all of HEW's service delivery programs—there were 308 at the time—to every eligible person. It turned out that the additional cost for fiscal year 1972 alone would have been \$250 billion—enough to double, not the HEW budget, but the year's entire federal budget! The expanded programs, moreover, would have required the recruitment and training of at least 20 million new service providers and administrators.

The resources of the federal government, in relative terms, are certainly no greater now than then. Today the government faces the challenge of overcoming the disillusionment that followed in the wake of overinflated hopes and expectations. Beyond that, moreover, it must also struggle simply to keep from being overwhelmed by its responsibilities—responsibilities, it must be noted, that no other level of government is any better equipped to fulfill. The list of demands and unmet needs is long and depressing.

I daresay that there have been GAO reports addressing every one of these issues and many more equally urgent ones: cleaning up toxic wastes, softening the blow of catastrophic illness, ensuring air safety, deterring insider trading, containing terrorism, holding down the escalation of health care costs, restricting nuclear hazards, combatting the AIDS pandemic, promoting competitiveness, fighting drug abuse, overcoming the trade imbalance, dealing with the S&L mess, coping with the social strains consequent upon the emergence of the social underclass, helping welfare mothers find work, and so on, and so on.

If this daunting array is to receive any effective response, it can come only through the most efficient possible use of the government's limited political, managerial, and fiscal capacities. Interestingly enough, only rarely these days do we find ourselves caught up in the old debates—such as those that swirled around the New Deal—over the appropriateness of federal involvement in such issues. There is no conservative of my acquaintance who would deny that this nation faces significant problems, and hardly any who would deny that these problems deserve governmental concern and response. The question has become not *whether* to respond, but *how* to respond—how to apply the government's resources as effectively as possible to new demands while continuing to address the many issues that cannot simply be lopped off the agenda.

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As soon as we begin to talk about the need for improving the government's capacity to choose among competing claims on its limited resources, we return inevitably to the matter of rebuilding the public service. Responding to the spectrum of competing claims will require that the federal government replenish its human and intellectual capital. The government needs people who are familiar with the available means of addressing these problems and who have the ability to design and manage programs that make the most precise, surgical use of these means. We cannot afford any longer to intervene clumsily in society's problems, and then intervene again to correct the mistakes we made the first time around.



We thus have greater need than ever before for people in government who have a profound understanding of the interrelationships among government organizations; the interrelationships among government and private-sector entities, both voluntary and for-profit; the techniques of intervention; the processes of management; and the means of ensuring accountability.

I think this need for the best possible people is axiomatic. A corollary, however, is that those in government must become more involved in the same pursuit toward which I urged my colleagues at HEW, and in which GAO has become so usefully engaged in recent years: that of ensuring not just that government agencies are devoting their resources to the purposes for which they were created, but that these resources are actually accomplishing the goals with which the agencies have been charged. At the heart of this pursuit is rigorous evaluation.

As I wrote some 15 years ago in *The Creative Balance*, in the absence of rigorous evaluation, "We cannot . . . find out how well—or how poorly—a particular effort is succeeding. And only if we know this—and know also the effectiveness of an alternative approach to the same objective—can we compare the two. Only thus, moreover, can we judge the value of pursuing the objective at all versus that of devoting the same resources to some wholly different purpose."<sup>1</sup>

It is true, of course, that attempts at evaluation have always been subject to certain weaknesses, some of which grew out of the widespread reliance upon contractors to do the evaluating. In my book, I sympathized with the feeling that too large a share of the money spent on evaluation—like that spent on research—went to the sort of contractor whose only visible qualification was a staff of ex-employees of the contracting agency. I mentioned a more basic weakness, however: the typical contracting agency's own inability to define with precision what it wanted to have evaluated, and then to monitor the contractor's performance of the defined task.

Another problem I pointed out—and one I suspect is still encountered today—lay in the fact that attempts at evaluation were often simply directed at whatever Congress had called a "program," even though the program might, in fact, involve a whole array of activities, such as formula grants to state and local governments, project grants to nonprofit organizations, support of training programs, and so on. Attempts at evaluation addressed to this kind of bureaucratic laundry list are seldom very useful.

But in an era in which the limited resources of the federal government are stretched to the breaking point, the most serious weakness in evaluation may be the instinct of the evaluator, particularly the internal evaluator, to apply input measures rather than to find out if the activity under evaluation is actually accomplishing anything.

I remember the time when, as Attorney General, I was invited to New York City to dedicate the new police headquarters. I was met at the airport by a deputy commissioner who was responsible for the city's battle against organized crime. I asked him how he was doing.

"Great," he said.

"Really?" I said. "What have you done?"

He recounted the number of people he had sent to jail. I said, "That's fine. But has that had any effect on organized crime?"

He continued in the same vein, telling me about the various indictments he had obtained and the dent they had made in the Colombo gang—or whatever—and how the NYPD now had the Mafia on the run. I said, "That's also fine. But have your efforts reduced any of the activities in which organized crime is engaged? Is there any less illegal gambling?"

He looked at me quizzically and asked, "What does that have to do with it? We're fighting *organized crime*."

This little reminiscence brings us back to something I mentioned earlier—something GAO has understood for quite a long time. It is not enough simply to make sure that funds are being spent on the purposes for which they were appropriated, or that people are carrying out their assigned tasks. The real question is whether, by doing these things, the agency is actually achieving its objectives.

While I was at HEW, I visited GAO to talk about evaluation with Elmer Staats. As I later wrote, "Now, under the leadership of Comptroller General Elmer B. Staats, who serves as Congress's watchdog over federal spending, [GAO is] making it a routine practice also to look into the efficacy of the expenditures. As Mr. Staats remarked in a recent address, 'From where we sit, it appears that both the executive and legislative branches of our government have been more concerned with starting new programs than with making certain that those we already have are working satisfactorily or could be improved.'"

GAO has, of course, made further strides since then. I recently saw an article by Eleanor Chelimsky in the Winter/Spring 1990 issue of the *GAO Journal*,<sup>2</sup> in which she reviewed the history of evaluation at GAO, focusing on the creation in the 1970s—about the time of my conversations with Mr. Staats—of the Program Analysis Division, and then the creation of the Institute for Program Evaluation in 1980, followed by its redesignation as the Program Evaluation and Methodology Division in 1983.

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Unfortunately, at about the same time that GAO's new division was created, the data gathering and analytic functions of the entire executive branch began falling into neglect. This was a matter of so much concern to me at the start of the Reagan administration that I went to see Office of Management and Budget (OMB) Director David Stockman. I tried to persuade him that no more serious damage could be done to the capacity of the government to make intelligent policy and programmatic choices than to allow the data base to decay.

Nevertheless, that is exactly what happened. In its November 1988 *Transition Reports*,<sup>3</sup> GAO called attention to the serious deterioration of these key functions of the federal government. Here is what it said: "Unfortunately, we have discovered

through our surveys that program evaluation and the data collection that supports it are—with few exceptions—in a depleted state in executive agencies today. Further, case studies show that basic data are lacking on such disparate and wide-ranging issues as health care quality, the state of the environment, and the results of weapons testing.”

The report went on to state that, “In 1984, and again in 1988, a review of evaluation services in non-Defense agencies found a significant general decline since 1980 in the capacity and availability of data on federal programs, although agencies varied.”

This is troubling to look back upon, particularly when you recall that, even at its best, evaluation of federal programs was simply not that good. Fortunately, there

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has been a turnaround during this president’s administration—if not in results, at least in attitude. GAO published a discussion paper in May 1990 entitled “Improving Program Evaluation in the Executive Branch.” The preface notes that in a meeting with GAO staff in May 1989, OMB officials agreed with GAO’s analysis of the problem and the seriousness of the situation. They asked GAO to detail what OMB itself could do to improve things, focusing on longer-term institutional changes rather than on the short-term fixes, but still assuming only a limited increase in staffing or funding.<sup>4</sup>

I think we may take further encouragement from the Director of OMB himself, my old friend Richard G. Darman. He spoke on November 16 before the Council for Excellence in Government, delivering a speech with the rather Darmanesque title of “Neo-Neo-ism: Reflections on Hubble-ism, Rationalism, and the Pursuit of Excellence (After the Fiscal Follies).”

Darman makes a persuasive case that, as a result of the recent 5-year budget legislation, the requirement for intelligent choice among competing policies and programs will be felt more urgently than ever before. The new sequester process, strengthened with spending caps, mini-sequesters, and pay-as-you-go requirements, bears him out.

But while the new budgetary framework compels hard choices, it provides us with the opportunity to take a fresh look at a host of issues. For example: the changing distribution of governmental benefits by age and income class; the shift from future-oriented investment programs toward present-oriented income transfers; the relative emphasis on prevention versus treatment; the opportunity for expansion of empowering, market-oriented programs; and so on down a long list.

Darman's tongue is in his cheek, of course, when he uses the term "Neo-Neo-ism" to take a jab at the New Deal, the New Frontier, and the "new paradigm." But on a more serious level, he notes that we have a number of opportunities to combine the best of "both the romantic rush of Neo-ism and the rationalist interest in systematic progress." One of these opportunities—he identifies five—is the extensive evaluation of both federal programs and "natural," non-federal experiments.

Evaluation fell out of favor as the federal initiatives of the 1960s and 1970s proved disappointing and early attempts at evaluation were shown to be flawed or biased. But systematic and sustained investment in evaluation is essential if intellectual capital is to be increased and if wisdom is to be gained from what would otherwise be fleeting facts.

**T**HE PRESSURES EXERTED BY THE 1990 BUDGET LEGISLATION MAY SHIFT THE EMPHASIS OF GOVERNING FROM THE OLDER ONE OF IDENTIFYING NEW NEEDS AND IMPLEMENTING NEW PROGRAMS, TO THE NEWER ONE OF IMPROVING OUR CAPACITY TO MEET EXISTING NEEDS.

I trust that all of you will do your best to hold the Budget Director to his commitment. I think what he says about the role of the 1990 budget legislation in exerting this kind of pressure is undoubtedly valid. It could, in fact, shift the emphasis of governing from the older one of identifying new needs and implementing new programs, to the newer one of improving our capacity to meet existing needs.

If this shift does occur, it will, of course, put additional pressure on GAO. But it will also give GAO added reason both to continue coaching OMB in the art of evaluation and to remind OMB that the "m" in its title does not yet deserve a capital letter. Meanwhile, it will make it more important than ever for GAO to promote a higher level of evaluation throughout the federal government and, more broadly, to encourage a higher level of maturity among the American people, who need to be brought to accept the necessity of making choices. •

1. Elliot L. Richardson, *The Creative Balance: Government, Politics, and the Individual in America's Third Century* (New York: Holt, Rinehart and Winston, 1976), p. 138.

2. Eleanor Chelimsky, "Expanding GAO's Capabilities in Program Evaluation," *GAO Journal*, Winter/Spring 1990, pp. 43-52.

3. *Program Evaluation Issues* (GAO/OCG-89-81'R, November 1988).

4. The paper goes on identify three goals, three sets of activities to reach those goals, and the resources OMB would need to bring about change. See *Improving Program Evaluation in the Executive Branch* (GAO/PEMD-90-19, May 1990).



### MIXED MOTIVES

Theodore R. Marmor, Jerry L. Mashaw, and Philip L. Harvey

#### AMERICA'S MISUNDERSTOOD WELFARE STATE: PERSISTENT MYTHS, ENDURING REALITIES

*New York: Basic Books, 1990. 288 pp.*

*By Mark V. Nadel*

**I**n this important new book, three scholars respond to the charge that America's social welfare programs are an abject failure. What these authors offer, however, is not just the standard liberal reply to a conservative critique that one might expect. Rather, it is a rich combination of rhetoric and policy analysis aimed primarily at rightist intellectuals who have asserted that welfare programs do not just fail to work but actually make things worse.

The authors point out that the standard attack on social welfare programs—in which a particular program is criticized on the basis of its failing to fulfill one particular purpose—represents an overly simplistic view of social policy. They argue that these programs can in fact be viewed from four different perspectives, all of which may be

necessary for a full understanding of these programs' design. In the "behaviorist" version, programs are to reduce poverty by influencing the poor to behave in more socially acceptable ways—working, staying in school, delaying pregnancy, and so on. The second model—the "residualist" conception—sees social welfare programs as the safety net of temporary assistance to people who, through no fault of their own, are poor or otherwise in need of assistance. The third and most widespread view is the "social insurance" model, in which the basic purpose of social welfare programs is not to pull people out of poverty but to prevent them from falling into it in the first place. A central concept in this model is that of earned entitlements, whereby one's benefits are linked to one's earlier contributions, with Social Security being the best example of such a program. Finally, there is the "egalitarian populist" model, which seeks redistribution of political and economic power. This approach has been far less evident in U.S. welfare policy than the other three.

In the authors' view, two key elements of social welfare policy in the United States have emerged from these competing conceptions. First, the government has a commitment to make certain that social insurance is available—not just Social Security and Medicare, which account for 60 percent of social insurance payments, but also more specialized programs such as unemployment insurance and workers' compensation. Second, for other social welfare programs, assistance should be means tested—that is, provided only to people who qualify on the basis of need. At present, these means-tested programs account for less than one-third of total public expenditures on social welfare. Moreover, a surprisingly small share of these means-tested programs involve direct cash payments of the kind that most Americans associate with such welfare programs as Aid to Families with Dependent Children (AFDC). More than two-thirds of them instead offer in-kind assistance, such as public housing.

Whereas critics see a crazy quilt of contradictions between these two types of programs—not to mention among the varying conceptions behind them—the authors see coherence. They develop the model of an "opportunity insurance state"

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that emphasizes both self-reliance and collective support.

The first element of this "opportunity insurance state" is social insurance. The authors are surprisingly upbeat in countering three charges often leveled against the welfare state—that welfare programs are fiscally undesirable, unaffordable, and ungovernable. In response to the accusation of fiscal undesirability, the authors present data showing that social insurance has neither slowed economic growth nor adversely affected the savings rate. They also point out that affordability and governability are relative terms. We may *feel* that we cannot afford Social Security and Medicare because real family income has flattened over time while social insurance payments have steadily increased. Similarly, we may *feel* that social welfare is ungovernable, given that the spending trend has gone ever upward. But the authors caution that a trend's mere existence does not necessarily mean that it will go on indefinitely. Social spending is not absolutely beyond the realm of political control: In the past, as economic expectations have changed, the government has been able to restrain growth in social expenditures.

Some of these reassuring conclusions are, perhaps, unrealistic, and dependent upon a judicious selection of supporting data. For example, although Medicare expenditures have been somewhat controlled, most of this control has been achieved by shifting the costs from the government to someone else—most recently, to the hospitals. Moreover, the fiasco over catastrophic health care legislation, which was passed and then quickly repealed after the elderly objected to paying a premium based on income, may well demonstrate that any attempt to institute more progressive financing is beyond the pale.

Another piece of conventional wisdom that the authors attack, perhaps with more success, is the notion that, despite enormous expenditures, welfare programs have not decreased poverty in the United States. In the first place, they argue, the purpose of welfare programs is *not* to decrease poverty but to insure workers against common risks and provide income for retirement—and these goals have been met. What's more, the authors point out, poverty has in fact declined; the propor-

tion of Americans in poverty has dropped from 22 percent in 1960 to 13.5 percent in 1988 (although most of this gain was in the earlier years and there has been considerable backsliding since). More importantly, Social Security and other social insurance programs have been effective in preventing people from slipping into poverty; it is in that preventative effort that the American welfare state has been most successful.

But what about the welfare programs that are the most controversial—means-tested programs such as AFDC? According to such critics as Charles Murray, these programs have not only failed to reduce poverty but have created welfare dependency, thereby increasing poverty over time. The authors respond that incentives are not the same as behaviors—that even though the welfare system might be interpreted as creating incentives to remain on welfare, it does not necessarily cause people actually to behave in this manner. Furthermore, recent increases in poverty have been due primarily to unemployment, not to any voluntary dependency on welfare programs.

The authors also discuss the U.S. health care system. This, they claim, is the only part of the welfare state that does not give Americans what they say they want—universal access to care. Instead, the health care system is driven by market forces. As a result, Americans pay more for their health care than do the residents of any other country, and the United States is the only industrial democracy that does not have some form of national health insurance.

Overall, this is a compelling and cogently reasoned book whose perspective offers a welcome alternative to the gloom and doom surrounding most discussions of welfare programs. It is not, however, without its flaws. For example, while it does discuss the concept of an "underclass," it omits any mention of racial issues, which have certainly affected public perceptions of the welfare system—as evidenced by Ronald Reagan's successful exploitation of the image of the stereotypical "welfare queen." Nevertheless, this book provides useful insights into the U.S. welfare system, and offers a needed reminder that the purposes of social programs should be considered before judgments are pronounced on their outcomes.



## MULTIPLE TROUBLES

Mark K. Landy, Marc J. Roberts, and  
Stephen R. Thomas

### THE ENVIRONMENTAL PROTECTION AGENCY: ASKING THE WRONG QUESTIONS

New York: Oxford University Press, 1990. 309 pp.

By Peter F. Guerrero

As we enter the third decade of federal involvement in environmental protection, the idealism that gave rise to the first Earth Day seems harder and harder to sustain. The problems of air and water pollution, hazardous waste, pesticides, and toxic chemicals seem *more* intractable today than 20 years ago. Not that the United States has not made efforts to solve them—it has—but these efforts have fallen short. It appears, for example, that the \$700 billion spent on air and water pollution control to date may not have been targeted at the most serious environmental threats. The Superfund—a “temporary” remedial program set up in 1980 to deal with hazardous waste—has only cleaned up a handful of sites and is likely to stretch well into the next century. Out of all the hundreds of pesticides and toxic chemicals that have been identified as hazards, only a few have been banned.

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And now, *global* environmental issues begin to loom, challenging us to find solutions for problems that have no historical precedent. Building consensus on the need to address international environmental problems, such as global warming, will require a herculean effort: Leaders of sovereign states will need to be convinced that worldwide environmental threats are serious and require immediate, joint action. Third World economies will need to be given room for growth even as environmental values are protected. And for Americans approaching these issues, a larger question emerges: How can we help build an institutional framework to accomplish on a global scale what we have had only limited success doing right here at home?

The framework at home is the subject of *The EPA: Asking the Wrong Questions* by Mark K. Landy, Marc J. Roberts, and Stephen R. Thomas. The time is ripe for such a review; the Environmental Protection Agency (EPA), now two decades old, has come to embody our hopes and aspirations for a cleaner, healthier world for ourselves and our children. But it has come to embody our disappointments as well.

EPA came into being on September 9, 1970, under an executive reorganization plan that consolidated a motley collection of federal bureaus and programs into one agency. Neither house of Congress chose to oppose its creation. Unceremonious as this beginning may have been, it masked a complex political reality: The young EPA was expected to be all things to all people. According to the authors, “The president and his aides expected the leader of EPA to be a balancer and integrator, to pursue environmental protection in ways that were compatible with industrial expansion and resource development. The advocacy community, in contrast, wanted EPA to champion environmental values . . .”

Over time, EPA has assumed the role of advocate for the environment (although there may be differences of opinion on how effective it has been as an environmental watchdog). Congress seems to have approved, increasing EPA's legislative authority through nearly a dozen major pieces of environmental legislation. But the increased responsibility has not come cheaply: For one

thing, the most recent environmental legislation spells out in painstaking detail how and when EPA is to accomplish its work. For another, the agency now finds itself answering to over 80 congressional committees and subcommittees. In the words of its administrator, William Reilly: "EPA is pulled in many directions at once by Congress, other agencies of the government, the public, constituency groups, the courts and, of course, the news media. We answer to many taskmasters."

Being pulled this way and that has made it difficult for environmental policymakers to forge a rational framework of environmental regulation and law, one based on sound science and focused on eliminating or reducing the most serious threats. EPA itself, in its landmark report of 1987, *Unfinished Business*, acknowledged the disparity between risk and resource allocation at EPA; the problems that EPA judged to pose the most serious risks were not necessarily the ones that Congress and EPA had targeted to receive the most aggressive action.

But it is the authors' contention that the chief cause of EPA's plight is not so much the presence of too many taskmasters as it is EPA's own unwillingness to take charge. "... EPA's encounters with the Congress, courts and the rest of the executive branch were characterized by a lack of deliberation. The EPA was allowed to ask narrow questions and give narrow answers. Oversimplifications persisted. Too often, strategic issues were avoided or ignored and public debate was concentrated on incompletely or inaccurately formulated questions."

In short, EPA failed to lead. Part of that failure lay in not educating the public about the difficulty of achieving environmental goals. In the authors' words, "EPA portrayed itself as an authoritative expert who could offer perfect protection. It did not help the public to understand that environmental risks are only imperfectly understood, and that many cannot be entirely eliminated at any feasible cost." As a result, public expectations were unrealistically high. That disillusionment and frustration followed was inevitable.

So, what should EPA do to get out of the predicament in which it finds itself today? For starters, the authors suggest, EPA must inform the public more effectively that the total elimination of health risks is impossible. They contend that EPA should focus on the issue of risk *reduction* rather

than elimination. It should also pay less attention than it does to health issues, since "pollution control is a much less important lever for improving public health than the control of smoking, drinking, diet, drug use, highway safety, and crime, which are all beyond EPA's control." Similarly, the authors argue, EPA should not concentrate on winners and losers in environmental policy decisions, since "income taxes, welfare systems, medical care, and economic development programs are all far more important in determining the distribution of wealth than anything that falls within EPA's purview."

In place of these responsibilities, the authors would assign to EPA the guardianship of the nation's "quality of life." While this charter would have the appeal of greatly simplifying the debate, "it implies that finding places to put garbage and keeping beaches free of debris may well be more important [for EPA] than trying to reduce a statistical cancer risk from more to slightly less than one in a million." However, the reader wonders if such a policy would not have the undesirable effect of trivializing the questions EPA asks rather than ensuring that it asks the right ones. In fact, it is far from clear how EPA, in targeting "quality of life" issues, could avoid becoming entangled in critical matters of public health and economic equity.

On the other hand, the authors' support for a greater emphasis on strategic planning and on EPA's responsibility to educate the public is very sound: Both elements are crucial to its future success. The United States will need a rational system for setting environmental priorities as it grapples with the difficult resource allocation issues of the 1990s. And a public that is well-educated in the difficulties inherent both in setting environmental priorities and in solving problems is essential to EPA's success.

For its part, the authors contend, Congress should not try to master the technical and administrative details of environmental protection that are EPA's proper domain; by attempting to prescribe in detail for EPA, Congress deprives the agency of "the discretion it needs to think and act strategically." They encourage Congress to concentrate on effective oversight—which is one of its strengths—while relying on agencies such as GAO for the "technical sophistication and greater appreciation of strategic questions" that are needed to do it well.





## TO THE RESCUE

Joy Dryfoos

### ADOLESCENTS AT RISK: PREVALENCE AND PREVENTION

New York: Oxford University Press, 1990. 280 pp.

By Sheila Avruch

**B**efore coming to GAO, I was employed as a case-worker and as a health educator and counsellor in public health clinics. In those positions, I met face to face the types of people I now deal with more abstractly as I sift through statistics on low birth-weight and infant mortality. I remember one wistful 13-year-old girl who had barely graduated from dolls but was now pregnant. Then there was the slightly older teenager, a burglar, who was not too worried about going to jail because there, unlike in the streets, he would at least get three square meals a day. I also can't forget the day we lost contact with a drug-addicted young mother who kept forgetting to feed her baby. I still wonder how these individuals' lives turned out.

Overall, sadly enough, the problems of teen pregnancy, delinquency, substance abuse, and school failure now seem even more acute, more intractable, and more discouraging than they did then. *Adolescents at Risk: Prevalence and Prevention* is the effort of one specialist, Joy Dryfoos, to determine the prevalence of these problems and to examine the extensive literature on strategies to prevent them. The breadth, completeness, and

thoughtfulness of her analysis make her book a valuable resource.

Delinquency, substance abuse, teen pregnancy, and school failure are not independent problems. Teens who exhibit one high-risk behavior tend to exhibit others. But efforts to prevent one type of high-risk behavior will likely affect other types as well. Dryfoos estimates that 10 percent of American youth (or 2.8 million) are at very high risk, and 15 percent (4.2 million) are at high risk, for delinquency, substance abuse, pregnancy, school failure—or some combination of these various problems.

Prevention efforts can be focused either at preventing *initiation* of the behaviors or at preventing *continuation* of the behaviors. Each of these approaches may fall short. Interventions intended to prevent the initiation of high-risk behaviors are sometimes targeted at low-risk children; so, of course, they *appear* successful, but in fact they represent a misdirection of program funding away from children who most need help. On the other hand, efforts to prevent continuation of high-risk behaviors may be directed at the appropriate people—but by that point it may be too late to help teens who are set on a course and resist change. Because problem behaviors that start early are often more deep-seated and have more serious consequences than those started later, Dryfoos recommends early intervention in the lives of high-risk children.

How early can interventions be made? Some answers are offered by the Perry Preschool Study—an effective and well-evaluated program that Dryfoos cites in every chapter. Subjects in the study were low-income, low-IQ children of three to four years of age; they were randomly assigned either to receive preschool training and family support through home visiting or to serve as the control group. Years later, Perry Preschool graduates at age 19 had significantly less reported delinquency, criminal involvement, welfare participation, and teen pregnancy, and more school completion, college attendance, and employment, than control group subjects. Only some forms of drug use were not significantly affected.

Other interventions targeted at preschoolers have had similar success. Such programs can improve children's self-image and later performance in school—a crucial factor, because doing poorly at school is associated with delinquency, substance abuse, and early pregnancy.

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Dryfoos advocates alterations in the education system geared to help high-risk children succeed in school in order to help prevent all high-risk behaviors. She stresses the importance of a positive school climate, committed teachers who set high expectations for students, principals who demonstrate strong leadership, and curricula that emphasize basic education skills, social skills, and experiential education. She also sees promise in programs that put high-risk children in contact with trained peers or adults who can serve as mentors. One critical goal is to make sure students remain at grade level at least through the third grade, since early failure is highly correlated with later problem behavior.

Dryfoos also discusses programs targeted at preventing each of these specific problems. Many different approaches have been applied to the problem of substance abuse. For example, "social influence" and "life skills" programs teach teens how to refuse to go along with their peers' risky behaviors and how to make their own decisions. "Alternate strategy" programs try to prevent behavior correlated with substance abuse, such as school failure and delinquency, by introducing positive activities such as volunteer work and by teaching competency skills in such programs as *Outward Bound*. Still other approaches seek to coordinate substance abuse prevention strategies in the community with those in schools. What *doesn't* seem to work are programs that rely solely on changing attitudes and boosting self-esteem, on providing information, or on media campaigns and scare tactics.

Juvenile delinquency is difficult even to define, as it runs the gamut from socially unacceptable behavior, such as acting out in school, to criminal acts, such as burglary and rape. It is also difficult to prevent antisocial behavior, although a few programs have been shown to prevent the initiation of delinquent behavior and some have influenced the extent to which such behavior is repeated or continued. The programs that show most promise are those that teach children problem-solving, social skills, and moral reasoning and that impress upon them the consequences of engaging in criminal activity.

Many programs exist to prevent teen pregnancy, but few have been tested. Those involved with this issue tend to advocate either abstinence or diligent contraception. Dryfoos suggests a two-pronged approach: making contraception available confidentially and providing counselling on life

choices. School-based clinics and family planning centers that offer such combined approaches do appear to reduce teen pregnancy. In addition, comprehensive support programs for teen mothers seem to encourage fewer repeat pregnancies, more school completion, and improved parenting.

Many of the successful interventions she highlights share certain features. They are based on the most current theory and research and focus on improving a wide range of outcomes. They are intensive, providing individual attention through small classes, mentoring, or peer counselling. They may also involve collaborative community-wide or multi-agency efforts.

I was disappointed to find that, in this book, Dryfoos almost completely ignores the question of how to pay for prevention programs. Teen pregnancy has been estimated to cost \$19.83 million annually in Aid to Families with Dependent Children, Medicaid, and Food Stamps. Each class of high school dropouts costs the nation an estimated \$240 billion in lost earnings and taxes over their lifetimes. Delinquency and substance abuse doubtless impose similarly high costs. But while these problems are costly, providing preventive programs can also be costly and the payoff may be far down the road. Given tight state and local budgets, legislators may hesitate to put new programs in place. Demonstration prevention programs need to be designed so that their cost-effectiveness or estimated cost savings can be determined.

Dryfoos's final message is clear and unambiguous: Even though further research is needed to clarify which interventions are most effective, we already know full well that at-risk teens need this country's attention and investment. A first step should be to improve basic services already in place, starting with the education system. A next step could be to extend preschool and family support programs to more at-risk children and families and to develop specific programs targeted to adolescents already in trouble. All young Americans—particularly those at risk—need positive images of themselves, their abilities, and the possibility of improving their lives. This country needs to help them reach a promising future—because they are our promise and our future. •

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